
# A STUDY OF ORGANISATION AND WORKING OF MARUTI UDYOG LIMITED

DISSERTATION SUBMITTED
FOR THE AWARD OF THE DEGREE OF

**Master of Philosophy**

IN

COMMERCE

BY

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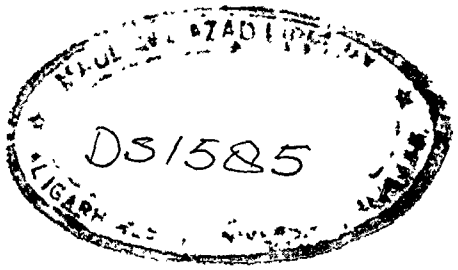
ALIGARH (INDIA)

1990

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**CERTIFICATE**

This is to certify that the M.Phil Dissertation entitled "A Study of Organisation and Working of Maruti Udyog Limited" submitted by Mr. Faheem Usman Siddiqui has been completed under my supervision. This work, in my opinion, is suitable for submission for the award of M.Phil degree in Commerce.

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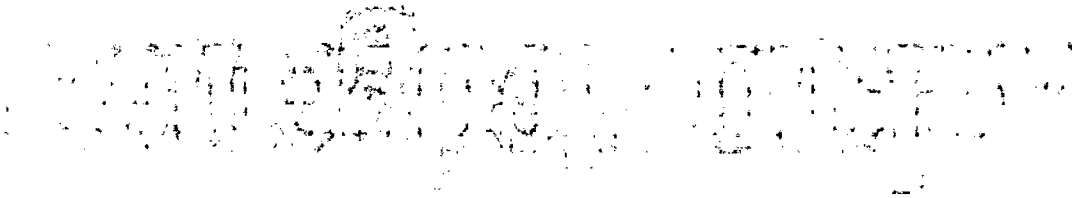

**ACKNOWLEDGEMENT**

All my efforts in bringing out this work would be in vain if I do not acknowledge the contribution of those who have inspired me at every stage of this work. I owe a great deal to my supervisor Dr. Nafees Baig, (M.Com, Ph.D., D.Litt., CASF, Manchester) Professor in the Department of Commerce, A.M.U. Aligarh without whose able guidance this work would not have seen the light of the day. He was the guiding force behind this work. The present work bears at every stage his keen interest, invaluable advice, enthusiastic support, sincere criticism, valuable suggestions and constant supervision. He spared his valuable time in spite of his busy schedule. I take this opportunity to express my indebtedness to him.

I express my deep sense of gratitude to Professor Sami Uddin, Dean, Faculty of Commerce and Chairman, Department of Commerce, A.M.U. Aligarh, whose benevolent attitude towards me and valuable suggestions from time to time gave me the courage to overcome the various associated problems. I would like to take this opportunity to pay my respect to Professor Ishrat H. Farooqui and Professor Habibur Rehman, Ex-Deans of Faculty of Commerce and Ex-Chairmen Department of Commerce, A.M.U. Aligarh, for their invaluable

suggestions and affectionate attitude towards me. I would like to thank Professor Abdul Farooq Khan, Dr. Qamar Uddin Khan, Dr. B.A. Iqbal, Dr. I.A. Bilgrami and other learned teachers of the Department of Commerce, A.M.U. Aligarh who enlightened me with their views and valuable suggestions. I am also grateful to Mr.Pervaiz Talib, Lecturer in the Department of Business Administration, A.M.U. Aligarh, whose suggestions have been of immense help to me. This work would have never been completed without the help of Mr. Abdul Aleem, Reader, Dr. Rafiqullah (Pool Officer) and Mr. Salman Khalil (Research Assistant), Department of Statistics, A.M.U. Aligarh. They were the guiding force in analysing the various statistical techniques used in the dissertation.

I will fail in my duty, if I do not acknowledge the efforts of my colleagues and friends especially Dr. Mohd. Talha, Dr. A.Q. Khan, Mr. Shakeel Ur Rehman, Mr. Ajaz Ahmad, Mr. Shoeb Ansari, Mr. Tanveer Akhtar, Mr. Imran Saleem and Mr.Mansoor Alam Khan for their help and encouragement they gave me during the period of my study.

I owe my deepest thanks to Mr. R.C. Bhargava, Chairman, Mr. A. Venkateswar, Manager, Budgets & Final Accounts, Mr. Ramesh Chandra, Manager, Internal Audit, Mr. O.P.

Gupta, Manager, Training and Recruitment, Mr. A.S. Sharma, Sr. Executive of Maruti Udyog Limited, and Mr. Suraj Kumar (Vice President) and Mr. N.A. Khan (Joint Secretary) Maruti Udyog Employee Union, for their cooperation and valuable support. I am deeply indebted to GP. Capt. S.L. Tandon (Retd) General Manager Service, Mr. M.M. Sood, Public Relations Officer, Mr. Mukesh Sharma, Chief Accountant, Mr. Naresh Batra, Manager, Spare Parts, Mr. A.S. Gill, Incharge Computer Section, Mr. S. Badrinath, Senior Accountant, Mr. S.K. Abrol, Asstt.Manager and Mr. A.U.Khan of M/s Competent Automobile Ltd., New Delhi, for their help and for giving me the necessary facilities to undertake field study. I express my sincere thanks to officers, workers, union leaders and respected customers who allowed me to take interviews and exchange my views with them during the course of data collection.

I do not know how to express my appreciation to Mr. Shahzad Ali, Mr. M. Shamshad Khan, Mr. Rashid Hussain, Mr. Ali Hassan, and other non-teaching staff of the Department of Commerce, A.M.U. Aligarh, except to say that without their cooperation this work would not have been completed.

I also owe a lot to my mother, brothers, and sisters especial my uncle Mr. Mashood Hussain Mufti and my elder brother Mr. Mohd. Tahsin Siddiqui for their encouragement and support.

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# Preface

## PREFACE

The automobile industry is an important segment of the country's engineering industry. It has a tremendous potential for generating employment, both direct and indirect, for promoting high grade skills, for building entrepreneurship and for stimulating the development and introduction of modern and sophisticated technologies. It also plays a vital role in the economic development of the country besides being of strategic importance. For the country's defence and security needs. TheIndian automobile industry which leads the industrial activity of the country is sufficiently grown, diversified and upgraded to become a lead sector in the process of modernisation of the entire engineering industry. In the early years the automobile industry in India was considered a luxury industry. The automobile industry in India has entered into a new phase with the advent of Maruti Udyog Limited. Born as a outcome of policy of the Government to modernize the automobile industry. The purpose of creating Maruti Udyog Limited was to raise the standard of the Indian Automobile industry and to produce an affordable, fuel efficient car. The Maruti Udyog Limited has made tremendous development. It now stands as one of the major units of the automobile sector. The steady progress made in all areas even during the early stages of

the establishment of this Car manufacturing Unit is a testimony to the fact that the Company as a potential for developing into an all important unit of the automobile industry.

**Objectives of the Study :**

The main objectives of the present study are as follows:

1. To study the growth pattern of Indian automobile industry with special reference to the Maruti Udyog Limited and to make a comparative study of different sectors of the automobile industry and their net contributions towards the growth of the industry.

2. To assess the role of automobile industry after liberalisation of the government policies in the early eighties.

3. To find out and assess existing place of Maruti Udyog Limited in the automobile industry.

4. To examine all impact of the MUL on the other Car Units of the country.

**Hypothesis :**

The present study seeks to examine the organisation and working of the MUL on the basis of following hypothesis:

1. The government policies hinder the process of growth and development of automobile industry.
2. The MUL provides excellent working conditions to their employees and workers.
3. The MUL is providing a number of facilities and amenities to their employees and workers.
4. Generally employees are satisfied with the working of the MUL.
5. The customers are generally satisfied with the performance of the Maruti vehicles.
6. The MUL achieved all its targets in time.
7. The MUL is also fulfilling the basic objectives as a public sector enterprise.
8. The government policies are responsible for the continuous price hiking in the Maruti vehicles.

**Methodology Adopted :**

For collecting data the present study has made use of a combination of methods such as collection of the secondary data with the help of annual reports,documents and records of

the MUL and information available in different journals, periodicals and dailies etc.

I have also made use of the primary data gathered with the help of questionnaires and interviews with company officials and customers. For gathering information from primary sources, three sets of a questionnaires were used, two related to the company's working conditions, facilities and amenities provided by the company and personnel policies of the company and one with customer to examine the level of satisfaction towards Maruti vehicles. The data was collected through the use of dichotomous type of questionnaire with the help of convenient sampling method. Also data were collected with the help of interviews and discussion were held with customers, senior executives, union leaders and the managing director of the MUL. Most of the interviews were recorded. The reason for conducting the interviews and discussions was to get reliable information because information collected through this source is more accurate than that obtained through questionnaires.

**Presentation of the Study:**

The study contains altogether five chapters.

**Chapter 1** discusses the growth pattern of automobile industry and the problems of automobile industry.

**Chapter 2** deals with the historical development of the Maruti Udyog Limited.

**Chapter 3** explains the organisational structure of the Company. It also covers the some basic elements of the Japanese management and their role in the organisational set up of the MUL.

**Chapter 4** has been exclusively devoted to the working of the Company. It also highlights the various amenities provided to the employees of the Company.

**Chapter 5** contains a detailed analysis of the questionnaires with the help of statistical tools. It also presents the summary and conclusions of the present study.

I do not claim that I have covered every thing, compared every aspect and explained every behaviour. what I have done is the systematic and critical look at every thing I could collect.

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# Abbreviations Used

## ABBREVIATION USED

| | |
|---|---|
| CI | Corporate Image |
| HCVs | Heavy Commercial Vehicles |
| HML | Hindustan Motors Limited |
| JIT | Just In Time |
| LCVs | Light Commercial Vehicles |
| MD | Managing Director |
| MSS | Maruti Sales & Service |
| MUL | Maruti Udyog Limited |
| PAL | Premier Automobiles Limited |
| QC | Quality Circle |
| SMC | Suzuki Motor Company |
| TELCO | Tata Engineering and Locomotive Company |

# Chapter 1

## AUTOMOBILE INDUSTRY - PATTERN OF GROWTH

Automobile industry occupies a significant place in the industrial economy of our country. It not only serves as a source of conveyance to the ordinary citizens but also plays a crucial role in the sphere of transportation and communication. The present chapter sheds some light on the historical development of this industry in India. It also focuses on the problems and issues confronting this important industry.

The origin of the Indian automobile industry can be traced to the year 1942 when the Hindustan Motors was established in Baroda.[1] In fact, long before this, the General Motors had an assembling plant in India and vehicles were assembled at this plant with completely imported assembly parts.[2] It was in 1949 that the first partially manufactured car rolled out of the assembly line of Hindustan Motors Limited.[3] The establishment of Hindustan Motors Ltd. (HML) was followed by Premier Automobiles Ltd. (PAL) with its Car units in Bombay and the Standard Motor Product of India in Madras.[4] As usual the initial years of the industry were the years of strains, stresses and all sorts of difficulties. During this period the automobile industry of the country consisted of only importers, assemblers, etc. who were just

in the assembly line. The manufacture of motor vehicles was not taken uptill 1953 when the Government approved the recommendations of Tariff Commission on the automobile industry. Most of the manufacturing units started production in 1953-54. They were compelled to work at a loss as a small market was over flooded with the imported cars of various designs. Besides, the three passenger car manufacturers, Ashok Leyland, took up the production of commercial vehicles in 1957 and Tata Engineering and Locomotive Company (TELCO) in 1962, Mahindra and Mahindra was promoted in 1965 in the Jeep line.[5] In two wheelers group Enfield India, Bajaj Auto, Escorts and Jawa were the prominent units but the breath-taking developments took place in the 80's. During this period, the major groups of automobile plying Indian roads can be categorised as :

(i) Commercial Vehicles
(ii) Two Wheelers and
(iii) Passenger Cars.

**Commercial Vehicles** : till eighties the progress of the automobile industry was uneventful. The Industry was accorded only a marginal status in the scheme of industrial development of the country. It was, of course, recognised even in the fifties that the consumption of motor vehicles in India was much below the potential demand for a country. In

the wake of this, Government allowed the setting up of two units for the manufacture of commercial vehicles with foreign collaboration in the mid-fifties.

In 1953 the Tariff Commission in its first report recommended that firms which a manufacturing programme should be allowed to assemble vehicles in the country.[6] In its second report (1956) the Tariff Commission recommended that high priority should be accorded to the production of commercial vehicles rather than passenger cars. The Fourth Plan gave a crucial role to the industry in the over all economic growth considering its high employment potential. A rise in the car out- put and impressive increases in the production of trucks, scooters are all parts of the fourth Plan. The causes for the industry's tardy development are its high cost structure and the poor quality of the vehicles. There was a point in the argument that much of the high cost of Indian vehicles was accounted for by the incidence of taxation to the tune of about 4.6 per cent. The dependence on too many and too small ancillary units has also contributed to the increase in vehicle prices. The price control policy badly affected the industry. So during Fourth Plan period Government decided to assist the industry by removing the price control. But major changes have taken

place after 1980 as the Government decided to change its policies. In January 1985 the Government announced the liberalisation of licensing of the automobile industry by freely permitting the manufacture of passenger car and commercial vehicles by all the existing manufacturers of four wheels. But, despite the liberalisation of licensing the automobile units will have to get Government approval for any new foreign collaborations. The Government would like the commercial vehicles and new cars to be rapidly indigenised. The heavy commercial units took advantage of the new opportunities and implemented expansion schemes. They also changed their pattern of production. The heavy commercial units Ashok Leyland and the TELCO implemented expansion schemes. The TELCO doubled its capacity to 54480 units and established a new unit in Pune.[7] Ashok Leyland started new units in Hosur in Tamil Nadu, Bhandra in Maharashtra and Alwar in Rajasthan.[8] Mahindra and Mahindra also expanded its capacity. The Hindustan Motor and the Premier Automobile too entered the commercial vehicles sector though their entry did not make much headway. The Table given below shows the trends in production of commercial vehicles for the period from 1948 to 1987. The data set out in Table No.1.1 reveal that the out put of HCVs increased at a high rate in 1948-70. The total number of units went up from 764 units in 1948-50

to 1,49,805 units in 1966-70 showing an over all rise of 19507.99 per cent with the growth rate of 848.18 per cent per annum. the out put of HCVs increased because major units raised their capacity due to the execution of plan schemes. But the average annual output in 1948-50 was only 255 units and it rose to 1146 Units in 1951-55. this period continued further and impressive increase can be observed from Table No.1 in 1956-60 when the average annual output rose to 14613 units. This may be mainly due to the fact that Ashok Leyland and the TELCO increased their output. This average further rose in 1961-65 and reached to 25257 Units. There was a marginal increase in 1966-70 and 1971-75 due to the impact of rising oil prices. In the year 1980 the HCVs sector crossed the mark of 2 lakhs and the peak was touched in 1981 by producing 65234 units in a year. Thereafter, however a stagnant trend emerged and the output was marginally better in 1985. The performance over the last five years is a dismal note in the entire automobile set up. The specter of cost increase and stagnant demand continued to haunt this sector even in 1986. The reason for the dismal performance in the last five years can be traced back to the credit squeeze which was introduced by the Government in July 1981. In a sector where credit is all important, the terms and conditions of credit and prevalent interest structure takes

on a highly sensitive role in determining the demand prospects. The Motor vehicle Act (1988) by putting various constraints and restrictions on the registration and movement of transport vehicles has also been a dampening influence on the demand side. The heavy commercial vehicle producers are entering a new phase of growth and development plans will have to be drawn up by those which have little unused capacity. In the coming years fresh schemes will have to be formulated on a selective basis for increasing the output of HCVs and upgrading technology.

Similar developments took place in light commercial vehicles sector. There was euphoria when four entirely new enterprises named DCM-Toyota, Allwyn Nissan, EICHER Motors and Swaraj - Mazda were promoted with Japanese financial and technical participation. Each of these units had an annual capacity of 10000 units. The volume of investment on modernisation expansion and new schemes was at over Rs.1000 crores.[9] Such heavy investment in concentrated manner in less than 5 years did not take place at any time in the earlier history of the industry.

**TABLE 1.1**

**Trends In Production of Commercial Vehicles**

(Unit : No. of vehicles)

| Years | Heavy Commercial Vehicles | %Rise/decline Over Previous years | Light Commercial vehicles | %Rise/decline Over previous years |
|---|---|---|---|---|
| 1948-50 | 764 | - | 11683 | - |
| 1951-55 | 5731 | 650 | 17707 | 51.57 |
| 1956-60 | 73064 | 1174.9 | 24452 | 38.09 |
| 1961-65 | 126283 | 72.9 | 27881 | 14.03 |
| 1966-70 | 149805 | 18.63 | 29161 | 4.60 |
| 1971-75 | 169833 | 13.37 | 40195 | 37.84 |
| 1976-80 | 207716 | 22.30 | 62189 | 54.72 |
| 1981 | 65234 | - | 24518 | - |
| 1982 | 61393 | (-5.89) | 28853 | 17.69 |
| 1983 | 60120 | (-2.07) | 27245 | (-5.58) |
| 1984 | 60500 | 00.64 | 32893 | 20.73 |
| 1985 | 66316 | 9.62 | 34912 | 6.14 |
| 1986 | 56701 | (-14.50) | 38184 | 9.38 |
| 1987 | 64600 | 13.94 | 40900 | 7.12 |

Source : Kotharis Year Book on Business and Industry, 1988 PA-29.

It is evident from Table No.1.1 that there has been impressive increase in the production of LCVs in 1948-80 showing an over all increase of 432.30 per cent with growth rate of 13.1 per cent per annum. Though the growth in the 80's has been blunted, it is observed in the Table No.1 that LCVs has fairly a good base in 1948-50. The average annual output was 3894 units but a small decline can be observed in 1951-55 showing a decline to 3541 units. But later, situation improved and a figure of 4890 units was achieved in

1956-60 and further improved to 5576 units in 1961-65. the annual production in 1976-80 was 12438 units. But this figure rose to 24518 units in 1981 which was nearly two times of annual production during the period 1976-80. Since then there was a continuous rise in the output of LCVs which shows that LCVs will be in greater demand for movement of goods in urban and rural areas and for passenger traffic also. But a marginal decline was evident in 1983. This was due to hike in oil prices and absence of enough market as there was a mushroom growth of new automobile units.

The demand for commercial vehicles may also get accelerated with new provision of the amended Motor Vehicle Act. The average vehicles have to be replaced at a faster rate for ensuring efficiency and economy in fuel consumption. The pattern of growth in sales of HCVs and LCVs in the Eight Plan may be different as the off take of HCVs will be more pronounced because of the economies in operation and the increase in volume of long distance freight traffic. the target for production may be around 2 lakhs in 1994-95 and capacity may be around 2.2 lakhs vehicles.[10]

**Two-wheelers** : It is opined by the experts that the most suitable vehicle in India is the two-wheeler. But the progress of the two-wheeler industry over a long period was

not impressive with no spectacular growth of out put as it was not accorded priority status by the Government. the Government attitude changed radically after 1980. Not only did it recognise the advantages of economies of scale but also the fact that the models being made in the country were hopeless and outdated. There was a long waiting period for delivery of vehicles in some cases. The Government recognised the need to satisfy the growing demand and the consumer was not getting the benefit of modern automotive technology in internal combustion engine technology outside India. the Government liberalised its technology import policy and eased the restrictions on foreign collaboration and import of critical components and reduced duties and taxes on fuel efficient vehicles. So with the new open door policy on technology imports, especially the easing of restrictions on manufacturing equipment and kit imports, there is enthusiasm among almost every well known manufacturer abroad to offer technical and financial collaboration to the Indian companies. the prominent ones are Ind-Suzuki (Motor cycles) with suzuki of Japan, Escorts (Motor cycles) with Yamaha of Japan, Bajaj (Motor cycles) with Kawasaki of Japan, Hero with Honda of Japan. In Scooters Kinetic with Honda of Japan, Lohia Machines and A.P. Scooters with Piaggio of Italy, Kelvinator (Mopeds) with

Garelli of Italy, Chamundi Mopeds with cycles Peugeot of France, Mopeds India with Motobecan of France and Enfield India (Mopeds & Motor cycles) with Zundapp Werke of West Germany.[11]

The data set out in Table No. 1.2 reveals that the production of two wheelers has increased to 1598900 vehicles in 1989 against 18626 vehicles in 1960 showing an over all rise of 8484.24 per cent with a rate of growth of 282.80 per cent per annum. the production figure was highest in 1985 showing an increase of 32.48 per cent over previous year. This sharp increase was due to the Government's liberalised technology import policy. A number of ups and downs were observed in entire two wheeler sector since 1980. The percentage share was also changing during the same period. The production of scooters has increased from 11994 units in 1960 to 725200 units in 1989 showing an over all rise of 5946.36 per cent with a rate of growth of 198.22 per cent per annum. The peak was touched in the year 1985 showing a rise of 42.05 per cent over previous year. This was mainly due to the fact that more units came in the line of production. Scooter production was stepped upto 7.25 lakhs in 1989 from 5.8 lakhs units in 1988. The increase in the output of the scooter over 1986 was 12.18 per cent against 36.89 per cent

## Table 1.2

### Trends and Changing Pattern of Production in Two-Wheelers

A = Output (No. of Vehicles)  B = Percent share to Total

Number

| Years | /Category--> | Scooters | Motorcycle | Moped | Total |
|---|---|---|---|---|---|
| 1960 | A | 11994 | 3998 | 2634 | 18626 |
| | B | 6439 | 21.46 | 14.15 | |
| 1970 | A | 58392 | 42968 | 1687 | 11304 |
| | B | 51.65 | 38 | 10.35 | |
| | | (386.85) | (974.74) | (343.70) | |
| 1975 | A | 101763 | 69739 | 36195 | 207697 |
| | B | 49 | 33.58 | 17.42 | |
| | | (74.85) | (62.30) | (209.70) | |
| 1980 | A | 209943 | 101586 | 106073 | 417602 |
| | B | 50.28 | 24.32 | 25.40 | |
| | | (106.30) | (24.32) | (193.05) | |
| 1981 | A | 202884 | 110795 | 185424 | 499103 |
| | B | 40.65 | 22.20 | 37.15 | |
| | | (-3.37) | (9.06) | (74.80) | |
| 1982 | A | 250727 | 129999 | 212562 | 593288 |
| | | 42.26 | 21.92 | 35.82 | |
| | | (23.59) | (17.34) | (14.64) | |
| 1983 | A | 273850 | 156254 | 329079 | 759183 |
| | B | 36.07 | 20.58 | 43.35 | |
| | | (9.23) | (20.19) | (54.82) | |
| 1984 | A | 297303 | 175283 | 376994 | 859580 |
| | B | 34.99 | 20.63 | 44.37 | |
| | | (8.56) | (12.18) | (14.56) | |
| 1985 | A | 422307 | 248001 | 455298 | 1125606 |
| | B | 37.52 | 22.03 | 40.45 | |
| | | (42.05) | (41.49) | (20.77) | |
| 1986 | A | 578063 | 325000 | 445000 | 1347063 |
| | B | 42.89 | 24.10 | 33.01 | |
| | | (36.89) | (31.05) | (-2.27) | |

**Table 1.2 (contd.)**

| Years | /Category--> | Scooters | Motorcycle | Moped | Total |
|---|---|---|---|---|---|
| 1987 | A | 651000 | 291000 | 423000 | 136500 |
| | B | 47.70 | 21.31 | 30.99 | |
| | | (12.18) | (10.47) | (4.95) | |
| 1988 | A | 580000 | 335700 | 511700 | 1427400 |
| | B | 40.64 | 23.52 | 35.84 | |
| | | (-10.90) | (15.36) | (20.97) | |
| 1989 | A | 725200 | 428000 | 445700 | 1598900 |
| | B | 45.36 | 26.77 | 27.87 | |
| | | (25.04) | (27.50) | (-12.89) | |

Note: The Figures in brackets indicate the percentage rise/decline over previous year.

Source: 1. Kothari's Year Book on Business and Industry 1988, p A20.

2. Financial Express Investment Week Guide February 26 - March 4,1990, Bombay, p.13.

in the previous year. But, since then, a decline was observed till 1987 when again the percentage share was increased. the decline in the growth rate of production could be attributed to the stoppage of production by two companies and strike in the other.

Similarly, motor cycles production was stepped to 428000 units in 1989 from 3998 units in 1960 showing an over all rise of 10605.35 per cent with a rate of growth of 353.51 per cent per annum. the motor cycles output was increased to 4.28 lakhs in 1989 from 3.35 lakhs units in 1988 showing a rise of 27.50 per cent over previous year. there was a drop in production by 10.47 per cent in 1987 against an increase of 31 per cent in the later year. A uniform trend was observed in the percentage share in the total Moped too showed a similar trends in production. The Moped production was raised to 511700 units in 1988 against 2634 units in 1960 showing an over all rise of 19326.72 per cent with rate of growth of 644.22 per cent per annum. the boom in this sector was observed in the year 1983 showing an increase of 54.82 per cent over previous year. There was a drop in production by 2.27 per cent in 1986 against an increase of 20.77 per cent in 1985 over a previous year. But a declining trend was continued even in 1987 over previous year. This declining

trend was due to the decline in popularity of 50 cc vehicles with higher operating costs and rising prices.

At present there are 43 manufacturers in the country licensed to make two wheeler but only 23 of them are active units with a licensed capacity of 5 million per annum while the installed capacity is 2.3 million.[12] Against this, the production in 1988-89 was 1.60 million. Prominent among them are Bajaj, LML and Kinetic Honda in Scooters, Escorts, Hero Honda and Bajaj in motor cycles and Kinetic, TVS and Hero in the moped. Most of the manufacturers produce only one product category. A noticeable shift in the buying habits of customers is observed. As customer would like to own their two wheeler today and pay for the same in convenient installments. There is chances that this trend in the coming years will accelerate. As new Motor Vehicle Act cam into enforcement it is expected that manufacturers may increase their production and offer better models in the near future which ensure that the co-emission of their vehicles does not exceed 4.5 per cent by volume. Side indicators have already been made compulsory for all two wheelers from February 1, 1990. The electrical system will also undergo a change from 6 v to 12 v. So there is a chance that the cost of all such addons will mean price increases. In the finance Act 1989 the Government changed the structure of excise duty

applicable to different vehicles. This depends on the cubic capacity of the engine. The duties are 15 per cent for engine capacity not exceeding 50 cc, 20 per cent for 50 cc to 100 cc and 25 per cent for 100 cc to 200 cc engine capacity in addition to this a special excise duty of 5 per cent will be applicable.[13]

The over all picture of the two wheeler industry is one of continuous growth. The technology which is inducted in two wheeler sector in India is at par with what is being sold in the developed countries. It is of course difficult to predict whether the industry will have to go in for another massive dose of technology import to catch up with the rest of the world. With the boom in two wheeler production and sales there is no doubt that the industry will continue to flourish.

**Passenger Cars**

Some major developments have also been taking place in the passenger car sector. The first passenger car plant of India was established on the outskirts of Calcutta in the early 1940s and in the next few years two more plants came up at Bombay and Madras.[14] But in subsequent years there was no induction of new technology in the passenger car sector and production stagnated. The idea of manufacturing "peoples"

Car (small and low priced ) was first developed in early 1960s but this project was not given serious consideration till the 1970s.[15] It took nearly three decades for the passenger Car industry to take its next step forward. In the early 1980s as a result of the oil crises the automotive industry world over had to look inwards and reorient itself to the changes in the product designs. So new manufacturing process technologies were evolved. These consequently led to an increased emphasis on weight reduction, optimum product design, appropriate quality and fuel efficiency. so the Government decided to took up the manufacture of a peoples car in public sector with Japanese know how and financial participation and the Maruti Udyog Limited was incorporated as a public enterprise company administered by the Government of India on 24th February, 1981.[16] Taking the advantage of the liberalised import policy other manufacturers have also launched new improved models with foreign assistance. The Hindustan Motors took to the manufacture of the Contessa Classic fitted with Izuzu engine of Japan.[17] Premier automobile too adopted a similar approach and a new model 118 NE fitted with an engine of Nissan of Japan came of the assembly line alongwith the earlier version.[18] The standard Motor Product also took to the production of the Standard 2000 (the Indian Version of Rover of UK ).[19] Other auto

units like the TELCO, escorts and Dolphin desired to take up Car manufacture with Japanese and French collaboration. But the government did not allow any new project as it was felt that the field was getting over crowded.

With the induction of Maruti Udyog Limited some major changes were brought about in car production in just about six years. The most remarkable fact is that inspite of vast expansion of production and marketing it is still a sellers market for the passenger car industry. Table No.1.3 given below shows the trends in production of passenger cars during 1948 to 1989.

It is clear from Table 1.3 that the total production of passenger car increased from 9267 units in 1948-50 to 166000 units in 1989 showing an over all increase of 1691.30 per cent with the rate of growth of 40.26 per cent annually. This gives the impression that the production of passenger car is very low as compared to other sectors of automobile industry. It is also evident from Table No.1.3 that the operations of the passenger car producers in the 50's were dictated by the slow growth in demand for cars. During the period of 1960-80 this sector of the industry could not expand impressively because of the rigid controls

**TABLE 1.3**

**Trends in Production of Passenger Cars**

( Unit : Number )

| Year | Production | Growth percent over previous years |
|---|---|---|
| 1948-50 | 9267 | - |
| 1951-55 | 23057 | 148.80 |
| 1956-60 | 64746 | 180.80 |
| 1961-65 | 108716 | 67.92 |
| 1966-70 | 168627 | 55.10 |
| 1971-75 | 176152 | 4.47 |
| 1976-80 | 163768 | (- 7.03) |
| 1981 | 42106 | - |
| 1982 | 42674 | 1.35 |
| 1983 | 44674 | 4.69 |
| 1984 | 63728 | 42.66 |
| 1985 | 102456 | 60.77 |
| 1986 | 115285 | 12.52 |
| 1987 | 121000 | 4.96 |
| 1988 | 151000 | 24.80 |
| 1989 | 166000 | 9.94 |

source : 1. Kothari's Year Book on Business and Industry 1988, P. A29
2. Financial Express, May 20, New Delhi, 1989.

over prices. The annual output was 3089 units in 1948-51 and 4611 units in 1951. There was a rise in 1960 when the annual production rose to 12949 units. This was the impact of plan schemes and use of cars for public transport as well. The 70's witnessed a set back with an enormous rise in price of gasoline and an increase in the cost of vehicles. The output in 1980 was even lower at 30538 units as against 38300 units

in 1971. This was mainly due to the sudden hike in the oil prices all over the world. The sluggish growth in early 80's was of course due to the restrictive policies of the Government. Untill 1983 when MUL commenced its operations the total output of 44613 units was on account of HM, PAL and Standard Motors. This shows an increase of 14075 units from 1980. This increase was largely due to the efforts of PAL as its share was increased by 12206 units. The HML also raised its production by 193 units. The year 1985 can be considered a watershed for the Indian passenger car industry when for the first time in its history total production per annum crossed the one lakh mark. This was not only crossing a figure of lakh but there was an increase of 60 per cent over the previous year. The Maruti Udyog Limited was responsible for this big push, whose output has increased by four times from about 12 thousand cars in 1984 to more than 48 thousand cars in 1985. Between 1983 and 1989 the total output rose by 272 per cent or by 121387 vehicles. The relative shares of the manufacturing companies have undergone significant changes over the last three decades. In 1960 Hindustan Motors accounted for 49 per cent of the total market sales followed by 34 per cent held by Premier Automobiles and 17 per cent by Standard Motors. In 1980 the share of Hindustan Motors had increased to 71 per cent while PRemier Automobiles

accounted for 20 per cent. In 1985 the market shares were Premier automobiles (29 per cent), Hindustan Motors (23 per cent) and Maruti Udyog (48 per cent). The share percentage of Maruti Udyog improved further in 1987 occupying 61.41 per cent while the share of other two manufacturers declined further. The share of HML came down to 16.13 per cent and PAL to 22.4 per cent. A unique aspect of passenger car was that the other two important producers namely Hindustan Motors and Premier automobiles have not suffered any set back in their output. They continue to sell the same volume as before though their waiting lists have disappeared. With the availability of easier finances and the facility of instalments payments more people are becoming car minded. There is every indication that the trend will continue and more and more people will buy cars which facilitate mobility and enable them to escape the rigours of travel in public transport services.

**Problems**

The automobile and anciallary industries are passing through a dynamic phase of growth where modernisation, expansion and new schemes are taking place on an unprecedented scale. The induction of new technology developed by Japanese, West Germans and French and the

promotion of new projects with technical assistance provided by these collaborators is resulting in the creation of new capacity. These new happenings have thrown serious challenges to industry. However, some of the policy issues like levels of indigenisation, selling prices of vehicle, quality/durability standards, economy of operation technology upgradation, excise and taxes etc, which have been raised again and again over the past few years still remain unresolved. Government is very much concerned for the industries' problems but clear cut policies have yet to emerge. The following may be termed as the main problems of the industry :-

**1. Lack of Technological Upgradation**

Motor Vehicle is a complex and sophisticated product. There are about 10000 parts and components which make a complete vehicle. some of these parts are produced by the vehicle manufacturer himself while other parts are supplied by the ancillary industry. The industry has to depend on a range of ancillary industries for raw material and inputs. This is the major problem which manufacturers are facing in maintaining quality. Most of the designs patents are imported ones. The available materials fastener and other items does not conform to the quality specifications called

for in the imported designs. The designs are not fully oriented, developed after substituted indegenious materials for adequate environmental tests to prove the pilots endurance. The process of indigenisation has affected the price and quality of vehicles. At present due to the lack of research & development activity indigenisation lead to an increase in price and detorioration in quality. The engine designers and other agencies meant for ancillaries like fuel injection pump, fuel filters, radiators, oil pumps, fuel pumps shockers etc. have not helped in the direction of variety rationalisation. Thus heavy investment in machinery, research & development and high quality of management skill required in automobile and ancillary industries to produce good vehicles based on fuel economy, safety and pollution standard have become essential.

**2. Government Policies**

Regarding the Government policies for automobiles the industry presents a strange story of development. The Governments' policies in regard to this industry specially the price controls and regulations, import substitution, taxation and protection have been inconsistent and these policies have played a role of major hurdle in the development of this industry. The industry has remained

controlled and protected in the sense that foreign capital investment was not allowed and thus the industry was kept away from foreign competition and latest technology. No developing country has ever been successful to plan and develop its own vehicle production technology. It appears that protection policy has made the industry backward. Taxation in all countries has been viewed as a means of bringing about changes in the level and distribution of income and wealth. Taxation has been identified as a significant source of industry's sickness. The cost of automobiles shows high degree of incidence of taxation. Tax rate varies between 44 to 60 per cent depending upon the type of vehicles. The taxation policy has not been consistent with the policy of growth of this industry.

### 3. Economic Factors

Besides the Government policies there have been many economic factors coming into the way of steady growth of the industry. Some of the significant factors include, absence of economies of scale in production, absence of infrastructure, credit facilities, high maintenance cost, poor investment in research and development. Absence of infrastructure facilities like the provision of motorable roads and bridges connecting villages in the interior of the

country to towns, non-availability of finance at cheaper rate of interest to buy vehicle, high operational costs mainly due to high petrol prices, duties and taxes, non-availability of certain critical raw materials at times, irregular power supply and frequent break downs. Lower per capita income which places passenger cars beyond the reach of a large majority of the country's population is also a problem to be observed. Poor feed back from user to producer about the performance of vehicles, heavy investment in research and development seems essential for the continuous upgradation of technology. The out dated and inefficient technology has to be replaced by fuel efficient and modern technology. The import of machinery and technology would add to the cost of production but this can be reduced significantly through economies of scale and other policy measures. The role of the auto industry has been emphasized as an engine of growth for the national economy from the point of view of revenue to the government, national defence, employment generation and industrialisation. This has been regarded as an essential and vital ingredient of economic development.

In conclusion it can be stated that the history of the automobile industry in India is of a very recent origin. Though the country was having workshops where assembling was

done on a large scale, the production of cars etc, has started in the country quite recently. The entry of Maruti Udyog Limited has given a new direction to the whole industry, particularly the car sector of the industry. The company has shown tremendous potential of growth which will be evident from a discussion in the next chapter where the historical development of the Maruti Udyog Limited will be examined.

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# Chapter 2

## HISTORICAL DEVELOPMENT OF MARUTI UDYOG LIMITED

In the preceding chapter an examination of the development of automobile industry was made. The Chapter contained the pattern of growth and development of the industry. It also dealt with the emergence of new enterprises in the wake of liberalised policies of the Government of India in regard to the growth of automobile industry. It was also noticed in the chapter that with the advent of Maruti Udyog Limited a new change has become evident on the scenario of this important sector of our economy. The present chapter attempts to analyse the development and growth of Maruti Udyog Limited and its impact on the growth of automobile industry as a whole.

The history of Maruti Udyog Limited synchronizes with the advent of the fuel efficient vehicle scheme of the Government. The Government of India appointed two committees headed by L.K. Jha in 1959 and G. Pande in 1961 to study the possibility of manufacturing a small car.[1] On the recommendations of these two Committees the Government decided to give out licence for the manufacture of a fuel efficient inexpensive people's car. Among the conditions it was stated that there should be no foreign collaboration and no import of capital goods, a number of proposals came up but

in the final analysis the Maruti Limited was given the licence to manufacture India's people's car. In the final agreement, it was stated that the car would cost around Rs.7000/-.[2] In 1976 it was affirmed that the recession in the market had caused further delay. Till late 70's the design and concept was out dated. As a result the Maruti was charged for bankruptcy and had to be liquidated. In October 1980 Maruti Limited was nationalised by an Act of Parliament.[3] Soon after nationalisation a search commenced for medium size cars and light commercial vehicles which would produce a modern, medium sized car. Keeping this in mind, the Maruti Udyog Limited was set up as a Public Sector Company on 24th February, 1981.[4] In April 1981 the assets acquired under the Act were transferred to Maruti Udyog Limited.[5] The main objectives of the Government in setting up Maruti Udyog Limited were to bring modernisation into the automobile industry, introduce fuel efficient vehicles and to produce a modern car at a price affordable by more sections of the people. A group of skilled persons attached to the Maruti alongwith the Government took a decision to make light commercial vehicles and a medium sized family car, 50 per cent of whose production was to be exported. So the government approached the leading manufacturers of Europe such as Renault and Peugot of France, Fait of Italy and

British Leayland of U.K. Out of which Renault was the only one willing to buy back a pickup version of the Car. All the Japanese companies - Nissan, Mitsubishi, Daihatsu, Honda and Toyo-Kogyo were approached by the Indian Government. The Japanese declined to enter into any collaboration agreement due to the reason that no one was willing to buy back 50 per cent of what was to be produced by Maruti Udyog Limited.

In September 1981 the Maruti Udyog Ltd. commissioned a market survey conducted by Indian Market Research Bureau (IMRB) to ascertain the kind of Car that the people are willing to buy.[6] The survey showed that a bulk of individual car owners used cars mostly within the city and that they were looking for an inexpensive, fuel efficient, low cost car with minimum of maintenance and with the capacity to carry upto six persons and small luggage. So in the year 1982 Maruti Udyog Limited re-approached the European and Japanese manufacturers. In the final analysis the Daihatsu (Subaru Model), Fugi Nissan Heavy Industries (Nissan Model), Mitsubishi (Mitsubishi Model) and Suzuki Motors Company (Alto, Fronte, Cervo models) were the Japanese Companies included in the comparative analysis. The problem was that all of them had engines which were twin cylinder. This was deemed too small and considered under powered for Indian

requirements. The Suzuki had a 796 cc engine version for the European market. It had a mix of manual and automatic manufacturing system. It was the lowest cost producer in its range of vehicles. It also provided the facility for making several models with one engine. Finally, the Suzuki gave the lowest quotation. In addition to this, the Suzukis internationally proven expertise in design and manufacture of fuel efficient automotive products and factors like readiness to transfer the latest technology, quality assurance, exchange and training of personnel, to make equity participation, and offer of competitive terms for lumpsum royalty payment were the comparative advantages to have clinched the choice of Suzuki as the partner of Maruti.

Consequently, a Joint Venture Agreement and License Agreement was signed with M/s Suzuki Motor Company Limited, of Japan on 2nd October 1982.[7] The agreement signed included the License Agreement for transfer of technology to Maruti also. This agreement was signed between Maruti Udyog Limited on behalf of Government of India and Suzuki Motor company which made Suzuki one of the owners of the Company alongwith the Government. The equity participation between Government of India and Suzuki Motor company was decided to be 74 per cent and 26 per cent with Suzuki Motor company having the

option to raise its share upto 40 per cent. The share of Suzuki Motor company in the equity of the Company is currently 40 per cent. The capital structure was decided with a debt equity ratio of 3 to 2. The Maruti Venture was envisaged to manufacture one lakh vehicles per year involving a total approved capital of Rs. 268.83 crores with an equity component of Rs. 85 crores. The Company Collaboration Agreement with SMC relates to the manufacture of the following vehicles :

1. Four seater, four door passenger car, which comes in two models ordinary and deluxe model. The deluxe model has the extra fitments like Air Conditioner, A Radio-cum-Stereo, Quartz Clock, Tinted Glasses, Superior Carpet and Leather upholstery.

2. Micro Bus/Van with seating capacity of 5 to 8 persons.
3. Pickup truck with payload capacity of 600 kg with the same body chassis as Micro Bus.
4. Four Wheel Drive Vehicle.

The basic objective in establishing Maruti Udyog Limited was to modernise the Indian automobile industry and to provide a fuel efficient car to Indian customers at a low cost. Before Maruti was established in 1982 the volume of production of cars in India was low. The 40000 cars produced

by the two car producers per year were of outdated technology. Such a low volume of production made it difficult for the industry to spend resources on Research & Development or to change the design of a car on a regular basis. The design of the two models were not changed or improved upon for many decades. The industry thus worked in the vicious cycle of low production volume and production cost. At the very outset of MUL, the members of the core team which was looking into the project decided to change the production to achieve their targets. So they felt that it was necessary to change the ongoing system of low volume production. To modernise the Indian automobile industry, MUL decided to get the latest product and process technology available in the world. For this, the natural choice was the Japanese technology. The Japanese automobile industry related not merely to manufacturing technology or lower labour costs but to wide gamut of industrial practice and culture. The superior management concepts and methodologies like "Just in time", inventory management, participative work ethics, relentless drive towards technological upgradation and expansion within a compact super structure are the main ingredient, to the success of Japanese automobile industry. All these trails are to be transplanted into the Maruti Udyog Limited. As a results of this collaboration, the

company started implementation of the project immediately. Trial production was started in November 1983 and the car (Maruti 800) production was launched in December 1983. When production was started, the company set up five goals for achievements. They were :

1. To achieve a production volume of 20000 in 1984-85, 40000 in 1985-86, and 100,000 in 1988-89. ( These have now been achieved).
2. To achieve the phased indigenisation programme as per commitment with the Government.
3. To achieve break even in the first year of operations i.e. 1984-85 and to obtain a small profit.
4. To achieve the quality standards of Japanese (Collaborator) in all operations and offer vehicles to Indian customers which are as good as Suzuki's even after indigenisation.
5. To achieve the cost standards of Japanese and keep the cost of Maruti vehicles low.

In order to achieve these objectives the MUL has adopted a number of measures. They can be summed up as under.

The initial agreement provides for about one- thirds of investment by Suzuki. the total investment would be around

Rs. 400 crores, Rs. 200 crores in Maruti Udyog Ltd. and Rs. 200 crores in ancillary industries. The land for the project, about 300 acres came as a gift from the then Chief Minister of Haryana.[8] The distinctive feature of the manufacturing plant was that modern high quality mass production technology was extensively employed. Assembly conveyors, painting plant, and welding plant are few distinctive equipment system. The equipment selection was made on global tenders basis to ensure a cost effective high technology plant. So orders were placed for various utilities also. As equipment has started arriving, all contracts for civil works required for installation of the equipments as well as for over all repairs of the factory-shed have been awarded. Various steps were taken to ensure adequate power supply to the factory from the grid. In addition to this, 5 MW Captive Power Generation was also established at the factory site.

The project was to be implemented in two phases. The phase I of the project involving the setting up of an assembly shop, paint shop and weld shop with the capacity to produce 40000 vehicles per year was completed in June 1984. Under phase II the engine assembly shop was commissioned in April 1985 as planned. In order to increase the flexibility another vehicle assembly line for the manufacture of Gypsy

(four wheel drive vehicle) was commissioned in October, 1985. The press shop took a new shape with the commissioning of the 2000 Tonne Transfer press in December, 1985. The machining lines for cam-shaft and crank-shaft were completed in January 1986 and transmission case line in February 1986. In the year 1986 substantial progress was made in the erection of Plant & Machinery for Weld shop and Paint shop in order to enhance the installed capacity. The other milestone of the year was the setting up of the computer centre with the installation of a Burroughs B5900 dual processor and development of comprehensive system to cater to user requirements in the division of marketing, finance, production, engineering, personnel etc. In the years 1988-89 a new VISYSA6-K mainframe computer system was installed. This has enabled more terminals to be made available in different work areas.[9] The captive power generation capacity was enhanced in 1986 with the commissioning of two more diesel generating sets each of 2.5 MW capacity. Fifteen hundred T Press line, Painted Body & Engine storage Conveyor, Welding Robots and Multispot Welding Machines were commissioned in the year 1986. In early March 1987 Cylinder Head and Cylinder Block Machining lines were installed and production was started in the same month. The Maruti Udyog Limited gave priority to build on its own engineering

strengths. The Maruti Technical Centre was inaugurated in mid 1985 and a wide range of facilities were added. The main priority in the application of Maruti's technological expertise was to develop the component manufacturing industry which was the real base of the vehicle. So the Company made out an advertisement to appoint the vendors on the basis of quality, technology experience etc. The Company also decided to establish the vendor upgradation division which provides consultation services to selected vendors with main objective to bring qualitative improvement in brought-out components. The basic principle of the division at the time of establishment was that the vendor should grow with the company, establish a longterm relationship and be treated as a partner in the total activity. The registered vendors are provided with drawings and development proposal was chartered. All terms and conditions were decided at the first stage and a letter of intent was issued later the longterm Basic Purchase Agreement signed. As part of the Vendor development programme, the Maruti signed a number of Joint Ventures such as Machino Plastic, Sona Steering systems, Bharat Seats, Asahi India Safety Glass, Jay Bharat Maruti and Mark Auto Industries Limited. By signing these Joint Ventures Projects a number of components were indigenised in 1987-88 such as Seats, Glasses, Plastic Injection Moulded items, Steering Gear, Steering Column, Fuel

Tank and Sheet Metal items. Similarly some major items indigenised in the year 1987-88 were Speedometer assembly, Head Lamp, Steering Wheel, Brake Pipes, Fuel Pump, Oil Pump, Wheel hubs, tie roads and body panels. The Vendor development programme made the indigenisation of Maruti 800 to the extent of 80 per cent, in Omni 78 per cent and Gypsy 53 per cent by the end of 1988.[10]

To develop Vendor department and to meet the challenges of indigenisation a Research & Development Department was established in 1986. The motive behind establishing of R & D section was not to design a new car but to concentrates solely on implementing modification and changes to the existing models as per Indian conditions. The changes are made to the model on the feed back of consumer to the company. The R & D Department carries out regular checks on the components and also carries out rigorous field tests. In the very first year FRP Hard Top for Gypsy has developed as an alternative to the P.V.C. Soft top. In 1987-88 several product modifications have been undertaken. The major modification carried out on the Omni has been a total revamp of the suspension. An Air conditioned version of Gypsy has been introduced in June 1988. The R & D Department played a major role in developing a vehicle for the physically handicapped.

Maruti Udyog was bound by a commitment given to Parliament by the Government of India that production of vehicles would begin in December 1983. The Company began sale of cars in December, sale of van started in October 1984. Distribution of vehicles was done according to a list prepared by using the well known method of generating random numbers by a Computer. The Maruti management accords high priority to provide prompt & efficient service after sale to their customers. So in the first phase company has appointed 21 dealers in 16 cities all over the country.[11] The second phase of the dealership activation plan was completed by appointing 18 more dealers in 1986. As a part of the phase III dealership activation programme, the company appointed 26 new dealers covering 59 cities of the country.[12] In 1988-89 the number of Maruti dealers rose to 68 but the number of Maruti authorised Service Station (MASS) was raised to 338.[13] The basic aim of setting up the dealers and service stations is to provided efficient and better service. A major programme was undertaken in the year 1988-89 to upgrade the quality of service by the dealers. The Corporate Image (CI) campaign was implemented to present a uniform and cogent identity and to give the showrooms a more professional look.

Since its inception the company is committed to provide suitable training to their workers. The main aim of

training & development programme are geared toward enhanced productivity and improvement in quality. The company provide in house training programme covered induction, orientation plan and on the job training in different disciplines to the individual employees. The programme of training of Company employees at the workshop of SMC in Japan is still continued. From the very beginning the Company is sending their employees to get necessary training in Japan. The first batch of 22 trainees comprising of Engineers, Supervisors and workers were sent to Japan in 1983. Since then a number of batches are sent to Japan to get the required training and to learn their work culture. The Maruti Udyog not only introduced a new technology but introduced a Japanese culture also which is the key factor of the success of Japanese Automobile Industry. According to Lee and Ansari, [14] the Japanese Management was based on a philosophy and organisational culture that emphasise hard work for common goals, consultative decision making, two-way communication system, long term planning, sharing of the over all objectives of the organisation by employees at all levels, establishing harmony and loyalty between workers and management and sharing a high degree of concern for people and their values. The team spirit is very strange in Japan and that Japanese managers do not behave like individuals but

as members of groups or sub-groups. There must be no deviation by members against the standards or norms of the company. The sense of belonging to an organisation is more important than the function are performed within the organisation. With the induction of new management concepts in the company which holdout the promise of sustained growth and achievement in all operational areas there has been phenomenal improvement in the performance of the company. Particularly, in this context is the infusion of work culture which emphasises the importance of hard and dedicated work as also a capacity to exhibit unwavering loyalty to the organisation is augmenting productivity. A worker is not merely a pair of mechanical hands but an invaluable source of ideas and thoughts which when given concrete shape can yield enormous gains in terms of improved performance in various areas. By adopting the Japanese concept of quality circles, employees are encouraged to form small work groups and jointly explore ways and means of stepping up productivity. The concept of quality circles helps to foster the involvement of people at all levels in contributing to the growth and well being of the organisation. In order to encourage all employees to participate in the growth of the company, different foray have been created for promoting team building, informating sharing, communication and joint

discussions on company issue. The various foray like Maruti Sahyog Samiti, joint Management Committee, Suggestion Scheme, and Small Group Activity are already proving to be highly successful. Maruti employee at all levels are required to wear the same uniform provided by the management, use a common canteen for meals, travel in the same bus. These practices are very useful in developing a sense of oneness. With the adopting of the "Open Office" system on the Japanese pattern the office is informal. The clerical staff and the officers sit in an open hall. There are no rooms for executives and managers. Tea is served at the work desk. No helpers or chaprasis are employed. One can feel the sense of pride and high morale all round. The open office system reinforces communication, promotes useful inter-action and reduces wasteful activity. Maruti culture has positively influenced the making of new institutions in industrial relations. The MUL workers have organised themselves as a single union.

To conclude it may be observed that the Maruti Udyog Limited occupies an important position in the automobile sector of the country. The steady progress made in all areas even during the early stages of the establishment of this car manufacturing unit is a testimony to the fact that the Company has a potential for developing into an all important

unit of the automobile industry. This was made possible due to continued efforts on the part of management which has been able to introduce a new style of management in Indian automobile sector. In the next chapter a discussion will be made on the new style of management and how under this style of management effective organisation structure of the Company has been built up.

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# Chapter 3

## ORGANISATIONAL STRUCTURE OF M U L

In the preceding chapter a discussion has been made of the performance and achievement of Maruti Udyog Limited in its historical perspective. It has been pointed out that the MUL has been able to provide a momentum to the growth of automobile units of the country with its new sense of direction and leadership. In this chapter an attempt has been made to examine the organisational structure of the MUL. It also analyses the role of the newly developed work culture in the MUL.

The concept of an organisation is as old as mankind and has undergone tremendous changes in the growth of industry. Organisation is generally defined as a group of persons formed to seek certain goals. An organisation comes into existence when there are a number of persons in communication and relationship to each other and are willing to contribute towards a common endeavour. Different authors have defined organisation differently. To have a comprehensive idea of this important function of management some of these definitions are examined here. Allen defines organisation as the process of identifying and grouping the work to be performed, defining and delegating the responsibility and authority and establishing a pattern of

relationship for the purpose of enabling people to work most effectively to accomplish the objective of an industrial Organisation.[1] According to Brown,"Organisation defines the part which each member of an enterprise is expected to perform and the relation between such members, to the end that their concerted endeavour shall be most effective for the purpose of the enterprise."[2] The word organisation is also used in the sense of structure or mechanism that enables living things to work effectively. Joseph L. Massie defines Organisation "as the structure and process by which a cooperative group of human beings allocates its tasks among its members, identifies relationship and integrates its activities towards common objectives[3]".George Terry defines organisation structure as "a diagrammatical form which shows important aspects of an organisation including the major functions and their respective relationship, the channel of supervision and relative authority of each employee who is incharge of each respective function.[4] Strauss and Sayles have defined organisation structure as more than a series of inter-connected boxes and lines on a chart.[5] According to these definitions organisation is recognised as a structure which means organisation is management's activity affecting human relations because it determines which people will have authority over others, what work people will do and types of

contacts they will have. People in an organisation do not start working together automatically unless they are provided with some mechanism of coordination and control. It provides an invisible frame work to integrate all the people working together towards a common goal. Organisation structure provides an indispensable sort of coordination in an organisation. An organisation structure can not remain static, for the simple reason that an organisation is satisfactory today may not be so effective tomorrow. It needs certain periodic changes and modifications according to the future needs and situations in terms of objectives, jobs and personnel. If changes are not incorporated from time to time, the organisation will lose its dynamism and practical utility, resulting in confusion, disorder and dissatisfaction among the employees, customers, shareholders and society in general. A good organisation structure also helps to determine the manpower requirements of an enterprise and to make necessary alteration in the existing manpower. For my purpose in this dissertation, I have taken the organisation to be an activity of a business unit through which the various functions in it are being carried out by the management group the upper, middle and the lower under a well coordinated organisational structure.

Coming to the organisation of the MUL, it can observed that Japanese style of management played a crucial role in building a strong an effective organisational structure at Maruti Udyog Limited. The Japanese have excelled themselves in their system of management. The success of Japanese management system is based on two elements. As an individual a Japanese is totally committed to his work and his company and continuously strives to excel. Secondly the sense of belonging to an organisation is far more important than the function one performs within the organisation. Individual excellence is subordinated to organisational excellence. The main thrust of an individuals activity is towards contributing to the performance of the group he belongs to Managers and workers often work together in a group without either party losing respect or regard for the other. The system of rewards is linked to group performance and not to individual merit alone. In short the whole Japanese management system is based on (i) strong group feeling (ii) self-sacrifice for the interest of the group (iii) a strong sense of "We" versus "They" (iv) a willingness to over work to achieve long range goals (v) loyalty with the organisation (vi) respect for elders. These Japanese practices are gaining popularity in the Maruti Udyog Limited which has adopted and introduced many new concepts such as wearing a common

uniform, eating in a common canteen, coming to work before time, morning exercises and open office system etc. Before discussing the Maruti-culture and position and role of different functionaries at the MUL it is necessary to shared some light on the important concepts which are playing dominant role in organisation set up of the MUL.

**JUST IN TIME SYSTEM :** The Japanese systematic approach, meticulous planning and keen appreciation have resulted in establishing the famous KAN-BAN or JUST-IN TIME system which has reduced their inventories and thus costs drastically. The Just-In-Time (JIT) system is a new way of thinking, planning and performing with respect to repetitive manufacturing processes. The JIT system is effected and controlled by the use of a production order card called Kan Ban. Kan-Ban is used to order production of the portion withdrawn by the subsequent process. The key elements of a JIT system are small batch sizes, reduced material handling, level scheduling, low inventory levels and production control by using Kan-Ban cards. In the production process each operation station is governed by a Kan-Ban card which describes the parts origin, destination, identity and the quality required. The significant feature of JIT system is the reduced inventories all over alongwith a diversity in product line.

The benefits of JIT are associated with improved productivity, reduced costs, better quality, improved responsiveness to consumer needs, better employee relations, reduced inventory, better supplier relations, reduced time required to manufacture a product etc. When the JIT system is implemented, operations in entire factory become flexible. The JIT system requires that worker should be willing to help, manage operations at shop floor level by examining a product quality, suggesting improvements in the product system. Quality circles are oriented to provide this need for quality and productivity improvement.

**Quality Circle** Quality circle is a small group phenomenon. It is a group of employees belonging to the same work or doing similar type of work, meeting voluntarily and regularly to identify analyse and resolve work related problems. It is basically a problem solving and participative decision making group. Generally quality circles started working on problems concerned with quality. A number of long term benefits of quality circle (QC) could be identified. QCs add new challenges to the work. The QC movement helped to get many people involved and support the national effort to improve quality. They also provide better understanding of the work. The members are trained in communication skills, problem

solving techniques and an understanding of group dynamics. Quality circles and quality control are key activities in the effort to achieve leadership in equality and retain an edge over others in international competition. Quality circles bring creativity to the shop floor level. It induces a sense of belonging to the organisation and strengthens team spirit. The typical elements in QC organisation structure are quality circle member, leader, facilitator, steering committee and coordinator. Quality Circle members belong to one work area. Their membership in the circle is voluntary. The responsibilities of members are to attend all meetings in time, to obey policy rules and the code of conduct of QC. The members are required to get thorough knowledge of statistical analysis. Quality circle leader is elected by the circle members by consensus and is a member of the circle. The most important feature of QC is free and uninhibited participation by all members. The leader should moderate the discussion and properly assign the work so that no person dominates or withdraws, but every one gets an opportunity to share in idea generation, data collection and interpretation. The leader has the responsibility to maintain cohesiveness and a sense of belonging among circle members. The function and responsibilities of a circle leader are to maintain the progress of the circle, maintain records of circle

activities, seek advice and help when required, use facilities for assistance in circle activities, conduct meeting regularly and assign work to all create coordination and harmony in the circle, serve as a link between members and management. The facilitator is nominated by the top management and is usually a manager or senior manager in the shop, section or department. The facilitator should have a good educational background, a working knowledge of manufacturing details, quality control process statistical techniques and a good understanding of activities in the work centre. The responsibilities of the facilitator are to support the circle in their different stages of growth, help the circle in making presentations to the management, follow up new projects, enthuse the circles in problem identification and finding solutions and provide training where necessary. The coordinator is appointed by the management. He/she directs the administration of the programme and is the line for behind the entire activity. The coordinator provides resources to the circles, coordinates the activities of the facilitators resolve conflicts, obtains management support and participation, conducts, the annual meetings of the circles for case presentation and awards of recognition. The coordinator is a member of the steering committee which oversees the overall functioning of QCs in

the organisation. The Steering Committee is made up of the Head of the departments from major function and is headed by the Chief Executive of the Organisation. It is an advisory body which provides guidance and direction.

**Experience of Quality Circle Process in MUL** In the Maruti Udyog Limited Quality Circle meets regularly for about one hour on a specified day twice in a month. The meeting is held in the premises of the company. Meetings take place after working hours so that there is no loss in production. The members get together initially and go through a brain storming session to start with. During this session, which may last several meetings, problems and concerns of the circle members, are discussed in their proper perspectives. This is a free for all session where the listing of all items is done without any predetermined stand or attitude. Generally problems are related to reduction in time, obtaining better quality, reduction in cost, improvement in communication, improvement in productivity and safety etc. After the problems are selected, the circle collects the necessary data then statistical techniques such as check, testing, frequency distribution, histogram, line-graph and control chart are used in the analysis. The causes that are responsible for the various problems and constraints are

identified. They are then charted in a cause and effect diagram. At this stage again some statistical tool is required to pick the most important cause or set of causes which are to be considered for solution. Then different solution alternatives may be tried their acceptability and implementability in the organisation. Then an action plan is prepared for implementation with the help of facilitator and coordinator. The motivation for quality circle activities is recognition. The recognition reward may be in the form of prize, shield, study tour, participation in conventions and seminar or public announcement. The concerned circle writes a report on the problem that was successfully solved by them. These case reports are presented to the management in specially arranged function. The presentation meeting is attended by the Managing Director, Coordinator, Members of Steering Committee, Facilitator and Heads of the Departments apart from interested employees. Quality Circle activity in MUL started in January 1985 with seven circles. This grew into 329 circles till March 1989.

**Maruti Work Culture**

India has one of the least expensive working forces in the world. But if its productivity is also taken into account, the labour cost per unit of output is one of the

highest. The main causes are excess manpower, lack of scientific development of manpower, lack of scientific development of manpower norms, poor work commitment, lack of discipline, higher absenteeism, multiple unionism, inter union rivalry, unsatisfactory industrial relations, political influence etc. To overcome these problems it is required that in an organisation a work culture should be developed which may create a climate in which all employees are highly motivated and have a sense of belonging and involvement in the company activities. Maruti Udyog limited made a determined effort to reinforce the traditional strength of Indian workers with practices that have brought great success to the Japanese automobile industry. The MUL strives hard to promote among all employees a sense of belonging to the "Maruti Family" and of having a shared responsibility for keeping the family vibrant. A work day in Maruti begins 10-15 minutes before official shifts start. When employees arrive in the factory every one is in the company uniform, walking from the main gate to their work places, some are managers, some who are supervisors and others are workers. However, there is no way to distinguish among them from the uniform. Mostly employees come by common bus service run by an employee cooperative. There is much to be done before the shifts start. Punching of time cards, cleaning of individual

work place, morning exercises and a quick stock taking meeting are completed before the siren sounds. Every worker has an assigned set of tasks which are to be done before the vehicle reaches the next work station. On an average, the Maruti employee works for 7 1/2 hours out of 8 hours of shift time. Punctuality and attendance are two factors which are considered by the company as essential element of discipline. Every one from the unskilled worker to the General Manager has to clock the time on his/her individual time card on arrival at the factory. Just as shop floor operations begin sharp on time in the morning shift change over to the second shift when the second batch of shift workers come to take over the work is accomplished swiftly with no stoppage of the conveyor line. It was the hard work of its employees that enabled Maruti to exceed production targets every year. At the beginning of every year fresh overall targets are set and priorities are established these being such as to ensure the fast growth of the organisation. The targets and priorities are communicated to all employees in a letter from the Chief Executive. There is then a concerted and serious effort to achieve them. Progress is continuously communicated to employees through letters from the Chief Executive, the company news letters, position charts on the shop floor which give the latest production figures and

through the Department Manager or Work Supervisor. There is an open communication system in the organisation. Generally communication is in the form of letters from Executives in the form of circulars some times, directly to them, some times with immediate boss or through union leaders. As far notice boards are concerned, important circulars are pasted on it. Safety posters,bulletins, pamphlets, hand bills on specific issues and display boards are the main source of communication. Another important source of communication in the MUL are consultative committees dealing with production, grievances, safety education, medical and welfare activities. In addition, a number of other channels are used to communicate with workers. There are appreciation letters by M.D., audio-visual aids induction programmes, training and development inter-department meetings etc. Open office system itself is a major source of communication. In this system there is no separate rooms or cubicles for any body right upto the level of the head of the division. This system is adopted because it is economical and more people could be accommodated and it led to more superior supervision over what is going on in the office, thus serving as a counter check on the officers. This system makes communication easier.

The Company is committed to give to every individual self esteem and sense of dignity. From organisation point of view every individual is important. To inculcate a feeling of equality, discipline and belonging to one family a number of Japanese practices were introduced by MUL for instance all employees have equal office space, work in open offices. They come to office by common buses, eat in the same canteen, make use of common toilets and wear the same uniform. A common uniform policy helps to reduce psychological barriers between people at different levels. It is obvious that employees in an organisation who feel that they are taken care of would be motivated to perform better. This factor is given considerable importance in MUL. The organisation worker relationship is considered to be analogous to the parent and child relationship in the family. This is because the organisation is supposed to care for its employees just as in the family, the parent is responsible for the development and well being of the children. the department Manager is like the family head. Another important feature of Maruti culture is their Information Management system. The life blood of this system is information. Information is meticulously collected, discussed between concerned people, processed, shared and stored for future references. Policy decisions which affect employees are usually discussed at

special forums created for the purpose. To make information management system more effective MUL initiated the Maruti Sahyog Samiti which represents employees across all levels and all departments. Any major decision affecting all employees is taken after it is discussed at Maruti Sahyog Samiti. Meticulous attention is given to quality in the MUL. The primary emphasis is on building quality consciousness as a value. The company provide one of the cleanest industrial surroundings in India. Great efforts are made to keep the shop floor clean. Similarly cost control is a major concern and all departments are urged to find ways to generate profits through reduction of costs. The idea that every employee counts and every little suggestion helps in the spirit behind the suggestion scheme which was instituted in MUL in 1984. On the average one third of the suggestions received are implemented and rewards given to those making suggestions. If the suggestion is rejected, then the reasons for the rejection are explained to concerned person, group or circle. The Maruti culture would not have been possible without the cooperation of the Maruti Employees Union. The MUL workers have organised themselves as a single union. The Maruti Union is an internal union and its leaders are Maruti employees. Right from its inception the management has supported and encouraged the union. The MUL management is

quite aware of the fact that modernisation would not be achieved solely by import of modern technology. Equally essential would be the modernization of values and attitudes, work practices and approach to management. Maruti management realize the need to cultivate a modern spirit in the organisation.

***Organisational Structure of MUL***

Maruti Udyog Limited follows the philosophy of centralised policy making and decentralised administration. This policy is intended to take delegation down the line throughout the managerial hierarchy upto the lowest level of the officers to give them a sense of involvement. The MUL has adopted free- from organisation structure. It is an open system. It is a rapidly changing, adoptive, temporary system organised around problems to professional skills. It is suitable for those industries which have to work in high dynamic environment.

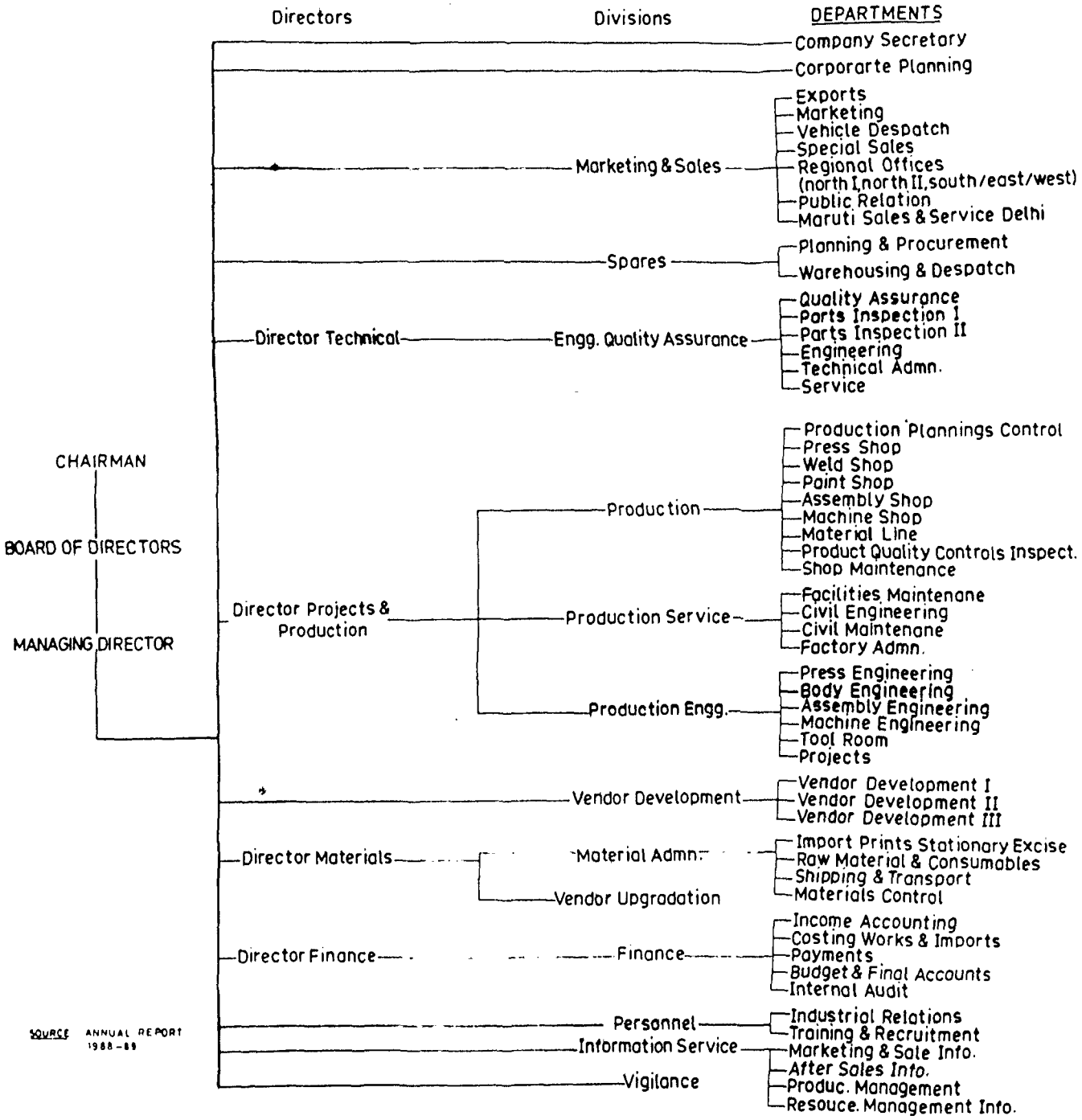
At the top of the organisation is the Board of Directors who hold responsibility for the management of the company. Legally the directors are appointed by the President of India. At present the size of the board is nine directors. Out of which six are full time directors and three are part time directors. One from the Ministry of

finance and other from Ministry of Heavy Industry or Department of Public Enterprises. These persons are Secretaries of the respective Ministries. The Chairman is also appointed by the President of India who also acts as a part time director. But recently the Managing Director of the company is promoted to the Chairman-cum-Managing director of the Company so the strength of the Board is reduced to eight and there is no part time director from this quota. An interesting feature of the MUL is that of a representative director who comes from the SMC. He is full time director. The other five directors are Directors of Material, Director of Technical, Director of Finance, Director of Production & Projects and the Managing Director of the Company. This will be clear from the chart No.1 given below. From the chart, it will be clear that the Managing Director is the Chief Executive of the Company. He is the Supreme authority. All powers are vested in the hands of M.D. He is responsible for all important policies matters relating to production, sales, marketing, quality control, vendor upgradation, employees welfare schemes, matters relating to entry in important contracts, matters relating to important organisation and personnel affairs etc. and matters on which board has authorised him to make decisions. He is assisted by four directors namely Director of Finance, Director of Technical,

# Chart No 1

## MARUTI UDYOG LIMITED

ORGANISATION STRUCTURE CHART




SOURCE ANNUAL REPORT 1988-89

Director of Materials & Director of Projects and Production. Similarly the Heads of the division (i.e. 12 heads) are also assisting him directly or indirectly in routine matters. In addition to this, the secretary of the company and Manager Corporate Planning is a helping hand and they are reporting directly to M.D. at head office. The Registered office of the MUL is at New Delhi and total net work is managed through five regional offices. The northern region is managed by the two regional offices situated at New Delhi and Chandigarh. The southern region is managed by the regional office situated at Madras. Similarly Western & Eastern regions are managed by their regional offices situated at Bombay and Calcutta.

There are 13 main division in the company, five out of them are reporting directly to M.D. (They are Marketing & Sales, Spares, Personnel, Information Service and Vigilance). The remaining eight division heads are reporting to their concerned Director. The Director (Technical) is assisted by one Division Manager and four Department Manager. Similarly the Director Projects and Production is assisted by three division managers (they are Production, Production service and Production Engineering). Production division Manager assisted by Department Managers of PPC, Press Shop, Weld

Shop, Paint Shop, Assembly Shop, Machine Shop, MX, PQC & I and Shop Maintenance. The division Manager of Production service is assisted by Department Managers of Facilities Maintenance & Operations, Civil Engg., Civil Maintenance, Factory Administration. In the same way the division Manager of Production Engg. is assisted by Department Manager of Press Engg., Body engg., assembly Engg., Machine Engg., Tool Room and Projects. Similarly the Director Material is assisted by three division managers; namely Vendor Development, Material Administration and Vendor Upgradation. Each division manager is assisted by a number of departmental managers. The director Finance is assisted by one division manager and five department managers.

In general the organisation structure of the MUL is that the Managing Director is assisted by four Directors, 13 division managers and 55 department managers and one Company Secretary. Each Director has few division managers. A division is broken into number of departments. Generally a department consists of one or two deputy managers. Below it there are two or three senior executives, and two or three executives, one private secretary and a number of supervisors. The strength of supervisor depends upon the size and function of the Department. Some departments need more supervisors generally in production areas. Below the

supervisor there are clerical assistant and technicians. there is no set quota for a department that particular department need so much staff below the department manager. Below the department manager it is difficult to classify or categorise employees in MUL. There is no categorisation in the organisation that such person will do only such type of job. This feature is strictly followed in non-production department. All are headed at par. No categorisation is made on the basis of designation. All employees are categorised between Lo1 to Lo20. Lo1 & Lo2 stands for unskilled personnel and Lo20 stands for M.D. the remaining employees fall between Lo3 to Lo19. A distinct feature of the company organisation is that it is structured in collective organisational units rather than in terms of individual positions.

In conclusion it can be stated that the MUL has emerged as one of the best organisations in the public sector in the country. This position of the MUL is mainly due to its effective organisation system. Today it stands out as a model organisation in India. In this organisation it is the work culture and work environment that drives the organisation to achieve high standards of performance. The success of this organisation is evident from the results achieved in the production and marketing of Cars. This aspect will be discussed in detail in the next chapter.

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# Chapter 4

## WORKING & PERFORMANCE OF MUL - AN APPRAISAL

In the previous chapter the organisation structure of Maruti Udyog Limited and the role of Maruti work culture have been discussed. It has also described the role of Japanese style of management in the MUL. The present chapter has been devoted to measuring the working efficiency of MUL. It will also analyse the personnel policies of MUl and the role of incentive schemes and various welfare activities performed by the Personnel Department of the MUL.

It is essential that any enterprise, whether established in the public or in the private sector, should run efficiently, otherwise the very purpose of its existence and continuation is jeopardised. The term efficiency, however, is subject to a variety of interpretations. It has been rightly stated that "like so many terms having a very large and in determinable connotation, the term efficiency is so wide and porous that there is little interpretation that can successfully resist."[1] Efficiency is basically an input-output relationship and hence the efficiency of any business enterprises can be judged from several angles, namely production, contribution to central exchequer, financial performance in terms of profitability liquidity, activity and leverage with the help of various accounting

ratios. The efficiency of the MUL will, therefore be discussed in the pages that follows aforesaid terms :-

**Production** A high rate of production in the MUL has been achieved mainly because of high productivity of men and machines in the MUL. Within a short span of time the MUL had achieved a production rate of more than 400 vehicles per day. The MUL has shown wide improvement so far as the production capacity is concerned. The conveyor served as storage for the body shells and also helped to maintain basic rate of production in the line. In the Press Shop metal sheets are pressed and punched to give them the required shapes of different body panels. These panels are welded in the Weld Shop to make the vehicle shell. Body shell is painted by the latest electrostatic painting technique in the Paint Shop. In the Machine Shop different components of the engine are machine. And finally the total vehicle is assembled in the vehicle Assembly Shop. The Table given below shows the pattern of production during 1983-84 to 1989-90.

The data set out in Table No. 2.1 reveals that the production has increased to 117400 vehicles in 1989-90 against 852 vehicles in 1983-84 showing an over all rise of 13711.77 per cent with a rate of growth of 1958.83 per cent

**TABLE 2.1**

**Production and Productivity of the Vehicles**

( Unit : No. of Vehicles)

| Years | Production as per project report | Actual production | Productivity per employee |
|---|---|---|---|
| 1983-84 | - | 852 | 1.48 |
| 1984-85 | 20000 | 22372 | 14.62 |
| 1985-86 | 40000 | 51580 | 20.66 |
| 1986-87 | 60000 | 80150 | 28.26 |
| 1987-88 | 80000 | 92630 | 26.38 |
| 1988-89 | 100000 | 105547 | 29.08 |
| 1989-90 | 115000 | 117400 | 32.35 |

Source : 1. Compiled from various issues of PE Surveys

2. Financial Express, New Delhi, April 2, 1990.

per annum. The production figure was the highest in 1985-86 showing an increase of 130.5 per cent over previous year. This sharp increase was due to the increasing level of indigenisation. In fact, attainment of the production targets well in time was linked to successful indigenisation. Similarly the productivity per employee has increased from 1.48 in 1983-84 to 32.35 in 1989-90 showing an increase of

2085.81 per cent. But a marginal decline was observed in the year 1987-88 due to some constraints like supply of indigenous components, expansion of spare parts activities etc. The main achievement of the MUL is its success in changing the Indian Car Industry by the introduction of a new technology and large volumes in the market. The three fold increase in the production of cars in India in a span of seven years is no minor achievement. Between 1981 and 1986 this segment witnessed a growth of 384 per cent.

The table given below compares the achievements of the main producers in Indian Passenger Car Industry.

It is evident from Table No. 2.2 that the passenger car segment of the automobile industry showed a faster growth between 1981 to 1988, showing an over all growth of over 207 per cent. The growth in the post 1981 period was made possible due to the inception of the MUL. The movement in market share of passenger car sector also showed inclination towards Maruti since 1984. Before that the Hindustan Motors Ltd. was occupying the bigger share in the market. But as Government liberalised the policy, the share percentage in 1984 favoured the Premier Automobiles Ltd. it was due to the fact that PAL made necessary modification in the existing model. But since than the MUL is responsible for holding

**TABLE 2.2**

**Production of passenger cars in India**

(Number)

| Year | Hindustan Motors Ltd | | Premier Automobiles Ltd | | Maruti Udyog Ltd | | Total |
|---|---|---|---|---|---|---|---|
| | Numbers | Market share in % | Numbers | Market share in % | Numbers | Market share in % | |
| 1981 | 23197 | 55 | 18874 | 45 | - | - | 42071 |
| 1982 | 21836 | 51 | 20711 | 49 | - | - | 42547 |
| 1983 | 22683 | 53 | 20929 | 46 | 175 | - | 43787 |
| 1984 | 24376 | 38 | 26620 | 41 | 12087 | 19 | 63083 |
| 1985 | 24064 | 24 | 29223 | 29 | 48635 | 47 | 101922 |
| 1986 | 22387 | 19 | 28501 | 25 | 63504 | 55 | 114392 |
| 1987 | 25561 | 21 | 31119 | 26 | 62632 | 52 | 119312 |
| 1988 | 27557 | 21 | 36567 | 28 | 65387 | 50 | 129511 |

Source : 1. The Hindu, Business Review, New Delhi; Sept. 22, 1988.
2. The Hindu, Survey of Indian Industry 1989, P. 197.

more than 50 per cent share in market. The decline in the share percentage in 1987 was because of the fact that production was stopped for a month to carry out increase in plant capacity. The further decline in 1988 was because of the more demand and production of PAL 118 NE Model. But at present (i.e. 1st April 1990) Maruti Car is occupying a more than 61 per cent of market share. It is also observed from Table No. 2.2 that the Hindustan Motors Ltd. and Premier Automobiles Ltd. are not able to make full use of liberalised policy because no major changes in production was observed, the minor changes in the PAL was due to the additional model but on the other hand the MUL continuously increased its production figures.

The MUL has been able to cross a production level of one lakh vehicles but fell behind to reach the indigenisation targets. The table given below shows the trends in indigenisation for Maruti 800.

It is clear from Table No.2.3 that the MUL is not able to reach the indigenisation targets in any of the years, because a large number of components manufacturers were unable to maintain adequate supplies of components, alongwith consistency in the quality of their products. The component

**TABLE 2.3**

**Indigenisation - Targets Vs. Actual for Maruti 800**

| Weight Average | | | Cumulative Indigenisation | | |
|---|---|---|---|---|---|
| Year | As per P.M.P (%) | Actual Achievement (%) | Date | As per Project Report (%) | Actual Achievement (%) |
| 1984-85 | 23.0 | 19.4 | 31.3.85 | 31.5 | 27.1 |
| 1985-86 | 31.1 | 34.7 | 31.3.86 | 42.6 | 36.8 |
| 1986-87 | 47.0 | 46.0 | 31.3.87 | 57.3 | 55.1 |
| 1987-88 | 65.7 | 62.7 | 31.3.88 | 84.5 | 79.5 |
| 1988-89 | 72.5 | 72.7 | 31.3.89 | 95.3 | 86.2 |
| 1989-90 | - | - | 31.3.90 | - | 90.0 |

PMP : Phased Manufacturing programme.

Source : 1. Annual Reports of various years.

2. Day after, (Monthly), New Delhi, May, 1990, P.58

industry postponed its investment decisions until it was sure that the MUL would be a going proposition.

**Sales** The performance of sales of Maruti Cars has been depicted in Table 2.4.

declining, the sales of Maruti Vehicles in number was increasing day by day.

**Export Performance** Exports are essential for the attainment of development of a country's economy so that it could finance its imports conveniently. Table No. 2.5 shows the growth of export earnings by the MUL between 1986-87 to 1989-90.

**TABLE NO. 2.5**

**Export Performance**

| Year | No. of Vehicles Exported | Export Earnings ( Rs. Crore ) |
|---|---|---|
| 1986-87 | 102 | 0.55 |
| 1987-88 | 713 | 3.62 |
| 1988-89 | 1408 | 9.46 |
| 1989-90 | 5100 | 36.00 |
| 1990-91* | 10000 | 70.00 |

Source : Same as Table 2.3.

* Anticipated.

It is evident from Table No. 2.5 that Maruti has a good potential of exports. The MUL started its exports in 1986-

87 by exporting 102 vehicles and touched the figure of 5100 vehicles in 1989-90 showing a rise of 4900 per cent with growth rate of 1225 per cent per annum. a sharp rise was also observed in the year 1989- 90 which shows an increase of 262.21 per cent from the previous year. Further it is clear from the table that there has been a sharp rise in terms of value also. The figure of exports rose from Rs. 0.55 crores in 1986.87 to Rs. 36 crores in 1989-90 showing an increase of 644.45 per cent with a rate of growth of 1611.36 per cent per annum. A sudden rise in the year 1989-90 was a result of the fact that the MUL able to enter into the French market and orders were also received from Australia and West Africa. In addition, vehicles were exported to Bangladesh, Sri Lanka, Cyprus, Malta, Tanzania, Nepal and Bhutan. A few other countries are also in the list of potential importers of Maruti Cars & Vehicles. Not only the physical achievements, there have been some financial achievements also which are discussed here.

**Generation of Internal Resources** PEs are expected to generate resources for their needs of expansion and growth as well as for replacement and renewal of assets. the internal resources (depreciation and retained profits) generated by the MUl from 1983-84 to 1988-89 are given below in the table No.2.6.

**TABLE 2.6**

**Generation of Internal Resources**

( Rs. in Millions )

| Year | Depreciation & Deferred Revenue Expenditure | Retained Profits | Total |
|---|---|---|---|
| 1983-84 | 14 | 17 | 31 |
| 1984-85 | 34 | 09 | 43 |
| 1985-86 | 67 | 30 | 97 |
| 1986-87 | 139 | 102 | 241 |
| 1987-88 | 193 | 184 | 377 |
| 1988-89 | 181 | 208 | 389 |

Source : Annual Report 1988-89

It is apparent from the above Table that the generation of internal resources has gone up by 12 times. The retained profits earnings show a continuous rise during the period under study. But on the other hand in 1986-87 the total of internal resources generation sharply increased and touched the figure of Rs. 241 million against Rs. 97 millions in 1985-86. This sharp rise was due to the sudden increase in the sales of the vehicles. In this particular year as stated earlier the figure of sales doubled. The year 1988-89 was very important because the share of retained profit in total

resource generations was more than the depreciation amount. Thus is clear from table no.2.6. that the MUL is generating a *good amount of internal resources from the very beginning.*

**Contribution to Central Exchequer**

The Maruti Udyog Limited has made and is making substantial contribution to augment the resources of the Central Government by way of dividends, excise duty, customs duty and other duties. The details are shown in the table given below:-

**TABLE 2.7**

**Contribution to Central Exchequer**

(Rs. in Millions)

| Year | Dividend | Income Tax | Custom Duty | Excise Duty | Total |
|---|---|---|---|---|---|
| 1984-85 | - | - | 313 | 132 | 445 |
| 1985-86 | - | - | 802 | 328 | 1130 |
| 1986-87 | - | - | 1130 | 1012 | 2140 |
| 1987-88 | 29 | 42 | 1023 | 1441 | 2535 |
| 1988-89 | 40 | 49 | 1128 | 1890 | 3107 |

Source : Same as Table No. 2.6.

It is clear from Table No. 2.7 that the contribution has increased by seven times during the period 1984-85 to 1988-89. The Company has become a very significant contributor to the central revenues. The excise duty paid by the company increased from Rs. 132 million in 1984-85 to Rs. 1890 millions in 1988-89, representing a 1331.82 per cent rise. Similarly the custom duty paid by the company also increased from Rs. 313 millions in 1984-85 to Rs. 1128 millions in 1988-89 showing a rise of 260.38 per cent. In the year 1987-88 the figure of custom duty came down to Rs. 1023 million from Rs. 1130 millions in the previous year. This was mainly due to the declining volume of imports.

**Profitability** Profitability is an important factor which the public enterprises should not ignore at the cost of their own growth. The performance can be viewed with the help of the trends in annual accounts and the working alongwith financial ratio from 1983-84 to 1988- 89 which is given in Table No. 2.8.

It is evident from Table No. 2.8 that the turnover of the company has increased from Rs. 42 millions in 1983-84 to Rs. 9257 millions in 1988-89 showing an overall increase of 21940 per cent with a rate of growth of 3656 per cent per

## Table 2.8

## Profitability Profile of MUL (1983-84 to 1988-89)

(Rs. in Millions)

| | 1983-84 | 1984-85 | 1985-86 | 1986-87 | 1987-88 | 1988-89 |
|---|---|---|---|---|---|---|
| Turnover | 42 | 1242 | 2864 | 6303 | 7665 | 9257 |
| Capital Employed | 607.8 | 1289.9 | 2333.3 | 2968.9 | 3513.7 | 4258.3 |
| Percent of Turnover to Capital Employed | 6.91 | 96.29 | 122.75 | 213.30 | 218.12 | 217.39 |
| Gross Profit | 22.8 | 43.2 | 136.2 | 281.7 | 499.7 | 589.1 |
| Percent of Gross Profit to Capital Employed | 3.75 | 3.35 | 5.48 | 9.49 | 14.23 | 13.84 |
| Profit before Tax | 17 | 9 | 30 | 102.3 | 264.4 | 314.2 |
| %Profit before tax to Turnover | 40.77 | 0.72 | 1.05 | 1.62 | 3.45 | 3.38 |
| Net Working Capital | 197.8 | 574.1 | 717.2 | 953.6 | 1530.4 | 2287 |
| Net Work | 297.4 | 360.4 | 586.5 | 865.6 | 1185.0 | 1601.0 |
| %of Profit before tax to Net Work | 5.72 | 2.50 | 5.12 | 11.82 | 22.31 | 19.63 |
| Liquidity Profitability Ratios | | | | | | |
| Current Ratio | - | 1.37:1 | 1.28:1 | 1.28:1 | 1.51:1 | 2.07:1 |
| Quick Ratio | - | 1.12:1 | 1:1 | .92:1 | 1.20:1 | 1.27:1 |
| Debt Equity Ratio | - | 2.58:2 | 3.05:2 | 2.78:2 | 2.62:2 | 2.45:2 |
| Gross Profit Ratio (%) | - | 2.9 | 4.0 | 4.3 | 6.3 | 5.9 |
| Operating Profit Ratio (%) | - | 7.48 | 7.48 | 8.40 | 11.03 | 10 |

Table 2.8 (contd..)

| | 1983-84 | 1984-85 | 1985-86 | 1986-87 | 1987-88 | 1988-89 |
|---|---|---|---|---|---|---|
| Premier Automobiles Ltd | | | | | | |
| Current Ratio | 1.54:1 | 1:1 | .58:1 | .83:1 | N.A | N.A |
| Debt-Equity Ratio | 1.36:1 | .39:1 | .31:1 | .29:1 | N.A | N.A |
| Gross Profit Ratio (%) | 6.3 | 10.2 | 9.8 | 5.7 | N.A | N.A |
| Hindustan Motors Ltd | | | | | | |
| Current ratio | 1.77:1 | 1.63:1 | 1.45:1 | 1.56:1 | N.A | N.A |
| Debt-Equity Ratio | .60:1 | .52:1 | .68:1 | .97:1 | N.A | N.A |
| Gross Profit Ratio (%) | 11.7 | 10.8 | 8.2 | 4.3 | N.A | N.A |

Source : 1. Various Issues of Kothari's Industrial Directory, Madras.
2. Various Issues of Public Enterprises Survey, New Delhi.
Note : N.A. stands for Not Available.

annum. In the year 1986-87 the figure of turnover was highest an increase of 120 per cent over previous year. This sharp increase was the result of more emphasis laid on indigenisation of the plant. Similarly the capital employed has also increased from Rs. 607.8 millions in 1983-84 to Rs. 4258.3 millions in 1988-89 showing an increase of 600 per cent with a rate of 100 per cent per annum. The percentage of turnover to capital employed has increased from 6.91 in 1983-84 to 217.39 in 1988-89 showing an increase of 3046 per cent. A sharp increase in the percentage of turn over to capital employed was noticed in the year 1984-85, showing an increase of 1293.49 per cent from previous year. The amount of net working capital has increased from Rs. 197.8 millions in 1983-84 to Rs. 2287 millions in 1988-89 showing an increase of 1056.3 per cent with a rate of growth of 176 per cent per annum. A sharp increase in the net working capital was also observed in the year 1984-85 which shows an increase of 190 per cent over previous year. All this indicates that the period under review was very crucial from the point of the development of the organisation because the manner in which the indicators such as capital employed, net working capital etc. had increased particularly in the year 1984-85 shows that the base of indigenous technical know-how was laid down.

The analysis of Table No. 2.8 would reveal that there has been an impressive improvement in the quantum of gross profit which has increased from Rs. 22.8 millions in 1983-84 to Rs. 589.1 millions in 1988-89 an increase of more than 25 times. As a percentage of capital employed has showed a marked improvement from 3.75 in 1983-84 to 13.84 in 1988-89. This reveals that the net worth has recorded an impressive upward trend from Rs. 297.4 millions in 1983.84 to Rs. 1601 millions in 1988-89 showing a rise of 438.34 per cent with rate of growth of 73 per cent per annum.

It is apparent from Table No. 2.8 that the profit before tax has also increased from Rs. 17 millions in 1983-84 to Rs. 589.1 millions in 1988-89 showing an over all rise of 3365 per cent. A remarkable improvement was shown in the year 1987-88 when the profit before tax was increased to Rs. 264.4 millions against Rs. 102.3 millions in 1986-87 showing a rise of 158.45 per cent. Such remarkable achievement was possible due to the fact that more emphasis was given on export, thus reflecting the declining volumes of imports and the production crossed the targets well before. A sharp decline was observed in the figures of profit before tax in the year 1984-85. Similarly the percentage of profit before tax to turn over, percentage of profit before tax to net

worth and percentage of gross profit to capital employed came down in the year 1984-85. Such sharp decline in various performance indicated in the year 1984-85 was due to the fact that more emphasis was laid on the expansion of the plant and to build an infrastructure to cope up with the rising demands of the vehicles.

Table No. 2.8 also shows the liquidity and profitability ratio of three major car manufacturing companies of the country. It is clear from the table that the financial position of Maruti Ydyog Limited was better than other two car manufacturing companies (i.e. Premier Automobiles Ltd. and Hindustan Motors Ltd.). The figure of the current ratio in the MUL was 1.37:1 in 1984-85 which was not satisfactory as it was less than 2:1. Generally 2:1 is considered as satisfactory. The figure of current ratio in the MUL further declined and came down to 1.28:1 in 1985-86 & 1986-87 which was also not satisfactory. But after 1986-87 there was continuous rise in the figures of current ratio and in 1988-89 the current ratio was 2.07:1 which was said to be satisfactory as it was nearly 2:1. Similarly the positions of PAL & HML was also not satisfactory as per the results of current ratios. The current ratio of the PAL was 1.54:1 in 1983-84 which came down to .83:1 in 1986-87. The current

ratios of HML was 1.77:1 in 1983-84 which came down to 1.56:1 in 1986-87 which indicates that the current assets were less than the current liabilities to meet requirements. The comparison of Debt-Equity Ratios shows that the position of the MUL was better then the PAL & HML. The Debt Equity Ratios of the PAL were 1.36:1, 39:1, .31:1 and .29:1 in the year 1983-84, 1984-85, 1985- 86 and 1986-87. Similarly the figures of the HML were .60:1, .52:1, .68:1 and .97:1 in the year 1983- 84, 1984-85, 1985-86 and 1986-87. It indicates that the financial positions of the two companies (i.e. PAL & HML) was not satisfactory because they were below 1:1. The capital structure of the MUL was decided with a debt to equity ratio of 3:2. The Debt-Equity Ratios of the MUL were 2.58:2, 2.78:2, 2.62:2 and 2.45:2 in the year 1984-85, 1986-87, 1987-88 and 1988-89. These were not satisfactory as they were below 3:2. But in the year 1985-86 the ratio was 3.05:2 which was satisfactory because it was close to 3:2. As per gross profit ratios all the three companies were not working satisfactorily because all showed a low profit ratio. The Gross Profit Ratio of PAL was 11.7% in 1983- 84 which came down to 4.3% in 1986-87. Similarly the Gross profit ratio of HML was 6.3% in 1983-84 decline to 5.7% in 1986-87. But the Gross Profit ratio of MUL was 2.9% in 1984- 85 which increased to 5.9% in 1988-89 indicating that the company was

moving towards higher profit ratio. Generally, in the initial years the Gross Profit Ratio is not very high.

From the above comparison it can be observed that the MUL financial position was much better than that of the other two companies. The MUL was established recently and so huge amount was required to be invested in all areas of establishment to make the necessary infrastructure base. The other factor which was responsible for the financial position of MUL was the value of Yen. During the period under review major changes was observed in the value of Yen. It is clear from the quick ratio analysis that the position of the MUL was very satisfactory between 1984-85 to 1988-89. The quick ratios were 1.12:1, 1:1, .92:1, 1.20:1 & 1.27:1 in the year 1984-85, 1985-86, 1986-87 1987-88 and 1988-89. They were satisfactory because they were approximately the same as 1:1.

The operating profit ratio was 7.48% in 1984-85 which rose to 11.03 per cent in 1987-88. But it declined to 10 per cent in 1988-89. On the basis of the operating profit ratios the financial position of the company was satisfactory because in the initial year the operating profit ratio is generally on the lower side.

After having discussed the financial performance of the MUL, we now turn to make a study of the personnel aspect of

management in the MUL. The purpose is to know the various welfare schemes initiated by the MUL for its workers and employees.

**Personnel Policy of MUL**

The aim of purposeful and effective personnel policy is to create and maintain a committed and disciplined personnel for the organisation. It should also aim at creating wide opportunities for advancement within the organisation by giving encouragement to good workers by stimulating action in the recruits of basic grade and by motivating individuals to stay in the organisation for a long period. The personnel policy of the MUL has many elements. These include :

(a) Recruitment & Promotion.

(b) Training & Man power development.

(c) Performance Appraisal.

(d) Working condition and Welfare facilities and amenities.

**Recruitment** The recruitment policy of an organisation generally decides its future. The recruitment in the MUL takes place at the entry level. The mass recruitment is restricted to three entry levels: Technicians, Supervisor and Executives. These posts are filled up by the direct recruitment and promotion of employees already in the service of the organisation.

**Promotion** Promotion is a reassignment of the individual to a job of higher position involving a change of duties to a more difficult type of work and greater responsibility accompanied by change of title and usually an increase in pay. The MUL adopted the following principles for promotion policy.

(i) Promotion should be done solely on the basis of merit.

(ii) Promotion is based on efficiency, good conduct and punctuality of the employee.

(iii) Promotions is made on the recommendation ofa committee consisting not less than three officers. This committee analyses the performance by using performance appraisal form. In each case the committee should record in writing the grounds on which claims of person or persons, if any, senior to the persons selected were over looked.

**Training** Training is an organised procedure for increasing the knowledge and skill of people for a definite purpose. All types of jobs in the organisation usually require some type of training for their efficient performance. Employee's talent are not fully productive without a systematic

programme of training. The need for a systematic training has increased because of rapid technological changes.

The MUL provides a special programme of initial training and education for new employees. Every trainee is exposed to production and to the function in every other department during a period of about six months. The training includes lecturer on Japanese work culture and company activities, given by the MUL executives. The next six months are spent on the job training depending upon the availability of vacancy and choice of the candidate. On the Job Training (OJT) is complimented by formal class room training. Exposure to various aspect of the MUL organisation is an important element in training. In house training, programmes were organised with a view to reinforce Maruti Culture and to promote the Quality Circle Movement. Technical Training in such areas as industrial, engineering manufacturing, quality control, statistical analysis, EDP, computer programming etc are continuously offered to all levels of employees. The programme of training of employees at the works of SMC in Japan also continues.

**Man Power Development** Every one agrees that the only real long lasting asset which an organisation, any society or nation, possesses is the quality and calibre of the people

working in it. Employees are undoubtedly the prime resources on which the success of an organisation depends. Without men, other resources cannot be effectively geared for achieving organisation goals. The MUL believes that the productivity of man depends largely on motivation and proper training. A consistent effort was made by the MUL to meet the employees expectations by way of incentives and facilities. The importance of human resources in the MUL is shown by employees related ratios given below in Table No. 2.9.

**TABLE 2.9**

**Man Power Development in the MUL**

( Rs. in Thousand )

| Year | Number of Employees | Turn over per Employee | Value added per Employee | Staff cost per Employee | Loan & Advances per Employee |
|---|---|---|---|---|---|
| 1983-84 | 883 | - | - | - | - |
| 1984-85 | 2176 | NA | 192 | NA | 1.5 |
| 1985-86 | 2815 | 1147 | 234 | 28 | 03 |
| 1986-87 | 3497 | 1997 | 396 | 34 | 05 |
| 1987-88 | 3526 | 2182 | 474 | 37 | 10 |
| 1988-89 | 3629 | 2588 | 520 | 44 | 11 |

Source : 1. Various Issues of Public enterprises Survey.
2. Annual Report of 1988-89.

It is apparent from the above table that the number of employees in the year 1983-84 was 883 which rose to 3629 in 1988-89 showing a rise of nearly 311 per cent. the figure of turn over per employee rose to Rs. 2588 thousand in 1988-89 against Rs. 1147 thousand in 1985-86 showing an over all rise of 125.7 per cent. The value added per employee was Rs. 192 thousand in 1984-85 which rose to Rs. 520 thousand in 1988-89 showing an increase of 170.9 per cent. The amount of staff cost per employee was Rs. 28 thousand in 1985-86 rose to Rs. 44 thousand in 1988-89 showing a rise of 57.15 per cent. The figure of Loan & Advance per employee was Rs. 1.5 thousand in 1984-85 which rose to Rs. 11 thousands in 1988-89 showing a rise of 633.4 per cent. It is concluded that the value added per employee was increasing at a faster rate then the turn over per employee.

**Performance Appraisal** Performance appraisal is a systematic and objective way of judging the relative worth or ability of an employee in performing his task.

In MUL performance appraisal of an employee is done by a committee consisting three members (i) the immediate supervisor of the employee i.e. called as Initiating Officer (ii) the next superior i.e. called as Reviewing Authority

(iii) one or more who are considered competent to assess the worth of the employee i.e. recommending authority. For employees in L1 - L7, the levels of authority is like that the Initiating Officer is of supervisor rank, Reviewing authority is Department Manager and Recommending authority is a committee of divisional Heads Similarly in other levels also as the level of employee is increasing, the level of Initiating, reviewing & Recommending authority also increases. The basic emphasis is given on appraising the employee's performance and not the person. Two appraisals are conducted in a year - one in January for the purpose of giving increments and promotions and another in July for the purpose of counselling. In the MUL the performance appraisal for is divided in two parts. Part I deals with the performance of the employee during the year. This includes knowledge, skill, quality of work, quantity of work, discipline. These factors are discussed with the employee in a free and frank manner by the initiating officer. Part II deals with the potential and capability of the individual and kept confidential. The assessment of the factor in Part I & II is quantified and total score for each factor is indicated in the first column. The total score for a factor is indicated in the last column. The total score for a factor

can be obtained by multiplying the weightage assigned to that factor with the scale points that award to the appraisee on the basis of his performance.

For example :

| Factor | Scale 10987654321 | Weightage | Total Score |
|---|---|---|---|
| Job Knowledge | 5 | 2 | 10 |
| Intelligence | 7 | 1 | 7 |

In case where overall rating for an appraisee is "outstanding" or "unsatisfactory" specific data or evidence must required to support the said rating. After compiling the appraisal report it is required that it must be discussed with the appraise at performance review meeting and an opportunity also provided to appraise for explaining his performance during the review period.

**Transfer** There is no transfer policy in the company.

**Resignation** Every employee has a right to submit his resignation through prior notice to the company. An employee who has been declared permanent shall required to give three months notice to the company.

**Working Condition** The work environment has important bearing on the efficiency and satisfaction of employees. The MUL operate for six days with three full shifts.The MUL has achieved an effective work shift of 7 hours 45 minutes excluding half an hour for lunch and two seven and a half minute rest periods. Sufficient space is provided to every employee to perform his/her work easily with comfort. The MUL gives special attention to improve the factory working environment, suppresses dust levels and improve aesthetics and land escaping. This was done by grassing of about 10 acres of land, planting of 200 Bouganvillia shurbs and Ashoka trees. The company lays great importance to the safety aspect on shop floors and other areas. The employees are educated and made safety conscious by putting up banners and safety instructions on all shop floors and other areas. The factory worked for 290 days a year (i.e.excluding 52 Sundays, 22 public and other holidays) which include 15 days planned shut down. The plant was shut down for about a week, twice a year, once summer and once in winter.

The following Welfare schemes have been initiated by the MUL for the betterment of the employees.

**Housing Provision** Apart from food and clothing, shelter is one of the basic needs of the human race. Construction work

on behalf of the Maruti Employees Cooperative House building Society Limited at Chakkarpur (Gurgaon) near the MUL factory was started in December 1988. The Company has also acquired land measuring about 100 acres in the village Bhondsi, District Gurgoan for meeting the housing requirements of more Maruti Employees.

**Mutual Benefit Trust** The MUL has set up a Mutual Benefit Trust (MBT) for its employees. The fund collected from the employees will be invested by the MBT for buying MUL shares. Thus MUL will have three share holders, the Government, SMC and the Trust. For joining the trust an employee has to invest a certain amount with a maximum of two month's salary. Once this is done the trust will issue certificates to the beneficiaries. An employee wants some money he can sell the certificate back to the trust. Similarly as an incentive if an employee wants to retain the certificate issued by the Trust for a longer period before selling back to the MBT. So the time of claim he has get the prevailing value of his share plus bonus for retaining the certificate for longer period. The participation in Trust is purely optional.

**Medical Facilities** Medical expenses incurred by the employees are to reimbursed in full only on production of bills. Reimbursement of medical expenses incurred by an employee are

to paid through a system of panel of Doctors/Shop/Clinical Labs/X-rays Clinics nominated by the Company. A Dispensary-Cum-First Aid Centre with adequate number of qualified Doctors rendering first aid and necessary treatment to the sick employees. An ambulance is kept under the charge of Medical Officer to shift serious patients to hospital.

**Canteen Facilities** An industrial canteen with all amenities is run within the premises of the company. Subsidised meal with standard menu is supplied to all employees at uniform pattern.

**Advance for Purchase Vehicle** Conveyance advances are granted to the employees and to repayble in easy instalments to purchase vehicle to their eligibility.

**Washing Allowance** This allowance is paid to all employees with a objective to come in a neat and clean uniform.

**Creche Facility** A modern creche has been established within the factory premises to facilitate women employees having small children.

**Educational Facilities** With a view to provide educational facilities to the children of the employees. Maruti has made arrangements for reservation of seats in two good schools in Delhi and Gurgaon.

**Attendance Bonus** Extra cash for a full or nearly full attendance record is paid by the Company.

**Leave Encashment** The Company had a system of paying wages for unutilized leave at the end of the year.

To conclude it may be observed that the efficient utilization of resources, as determined by several quantifiable criteria such as production, productivity, profits, contribution to Government exchequer etc. has been one way the MUL is seeking to discharge its debt to the nation. The MUL is also providing a number of amenities and facilities to its employees. The personal policy of the MUL is satisfactory and give more emphasis to welfare of its employees. It provides incentive for hard work, good conduct and loyality towards the organisation. The effectiveness of the various policies initiated by the MUL in its organisational working can best be judged only when we have "reactions" of various parties or groups of peoples associated with the organisation and working of the MUL. This will be done in the next chapter when an analysis of the questionnaire framed for eliciting the answers those at the helm of affairs and those at the workshop level will be made in the next chapter.

# Chapter 5

## FINDINGS AND CONCLUSIONS

In the preceding chapter a discussion has been made on the working and performance of the MUL with the help of different indicators. It also deals with the personnel policies of the MUL and the emergence of the MUL as a model employer. The present chapter contains the findings and conclusion of this study.

In the present study use of primary and secondary data has been made. For gathering information from primary sources, three sets of questionnaire were used and a number of interviews and discussions were held with customers, executives, etc. of the MUL. An analysis of the data obtained with the help of questionnaire is discussed here with the help of statistical tools. An analysis of questionnaire begins with questionnaire A which contains the questions regarding the working condition of the MUL, job attitude of the employees and workers and welfare amenities provided by the MUL. The questionnaire B consists of the questions regarding the growth and sales policies of MUL. The questionnaire C contains the questions which evaluate the performance and level of the satisfaction by customers.

An analysis of all the questionnaires is done with the help of Brandt and Snedecor formula for testing pis significant with the help of chi-square test.[1]

## Questionnaire A

**Case I Table No. (3.1)**

**Hypothesis:** We set the null hypothesis (HO) that the favourable responses (i.e. yes) of 146 units on the items 1,2,3....15 are the same i.e. there is no significant difference between the proportions p1, p2,..... p15 i.e. E(p1) = E(p2) = -------- E (p15) $\cong$ P^. Under the case of large sample P^ can be obtained P^ = $\sum$ pi/no. of variables here P^ = $\sum$ pi/15. Therefore under HO: as the sample size is large. Chisquare statistics $\chi$ = $1/P\hat{}Q\hat{}\sum_{i=1}^{k} ni(pi-P\hat{})^2$

where P^+Q^ = 1

$\chi^2 = 1/P\hat{}Q\hat{}\sum_{i=1}^{15} ni\,(pi-P\hat{})^2$ is $\chi^2$ distribution with 14 d.f. i.e. if $\chi^2 \geq \chi^2_{05}(14)$ reject HO and conclude that pis are significantly different, then we write conclusions accordingly.

**Calculation**

$$\chi^2 = \frac{1}{P\hat{}Q\hat{}} \sum_{i=1}^{k} ni\,(pi-P\hat{})^2$$

$$P\hat{} = \frac{\sum pi}{\text{No. of variables}} \qquad P\hat{}+Q\hat{} = 1 \quad \text{i.e. } Q\hat{} = 1 - P\hat{}$$

$\sum$ pi can be calculated by adding p1+p2+ ..... +p15. As p1, p2,....., p15 are given in percentage in table no.3.1. For

**Table 3.1**

**Working Conditions Including Financial Incentives: Opinions**

No. of Respondents 146 (Percentage)

| Aspects | Yes | No | Total |
|---|---|---|---|
| Satisfied with the financial earnings | 100 (146) | - | 100 |
| Satisfied with the present scale of pay | 82.88 (121) | 17.12 (25) | 100 |
| Getting some other benefits not included in salary | 28 (41) | 72 (105) | 100 |
| Getting some timely increment | 100 (146) | - | 100 |
| Satisfied with overall working conditions | 66.44 (97) | 33.56 (49) | 100 |
| Sufficient space for work | 100 (146) | - | 100 |
| Proper ventilation | 72 (105) | 28 (41) | 100 |
| Proper Lighting arrangements | 78 (114) | 22 (32) | 100 |
| Proper measures adopted to reduce noise | 72 (105) | 28 (41) | 100 |
| Satisfied with the Safety measures | 72 (105) | 28 (41) | 100 |
| Shift system of work | 100 (146) | - | 100 |
| Do you like shift system? | 82.88 (121) | 17.12 (25) | 100 |
| Do you prefer changes in shift system? | 55.48 (81) | 44.52 (65) | 100 |
| Environmental Pollution | 69.18 (101) | 30.82 (45) | 100 |
| Ecological Pollution | 56.17 (82) | 43.83 (64) | 100 |

Note: Figures in parenthesis represents no. of respondents.

convenience all value of pis are converted into proportionate values i.e.

$$p1 = 100\% = \frac{100}{100} = 1.00, \qquad n_1 = 146$$

Similarly other also

$p2 = 82.88\% = .83,$ $n_2 = 121$

$p3 = 28\% = .28,$ $n_3 = 41$

$p4 = 100\% = 1.00$ $n_4 = 146$

$p5 = 66.44\% = .66$ $n_5 = 97$

$p6 = 100\% = 1.00$ $n_6 = 146$

$p7 = 72\% = .72$ $n_7 = 105$

$p8 = 78\% = .78$ $n_8 = 114$

$p9 = 72\% = .72$ $n_9 = 105$

$p10 = 72\% = .72$ $n_{10} = 105$

$p11 = 100\% = 1.00$ $n_{11} = 146$

$p12 = 82.88\% = .83$ $n_{12} = 121$

$p13 = 55.48\% = .56$ $n_{13} = 81$

$p14 = 69.18\% = .69$ $n_{14} = 101$

$p15 = 56.17\% = .56$ $n_{15} = 82$

$$\sum pi = p1+p2+p3 + \ldots\ldots\ldots + p15$$

$$= 11.35$$

$$\hat{p} = \frac{\sum pi}{15} = \frac{\sum 11.35}{15} = .76$$

$Q\hat{} = 1-P\hat{}$ i.e. $Q\hat{} = 1-.76 = .24$

n1,n2,.....,n15 represents the number of respondents which gave their opinion favourable. Next step is to calculate

$$\sum_{i=1}^{15} ni(pi-P\hat{})^2$$

$$\sum_{i=1}^{15} ni(pi-P\hat{})^2 = n1(p1-P\hat{})^2 + n2(p2-P\hat{})^2 + .... n15(p15-P\hat{})^2$$

therefore

$n1(pi-P\hat{})^2 = 146\ (1-.76)^2 = 146\ (.24)^2 = 146\ (0.0576)$

$= 8.40$

Similarly other

$n2(p2-P\hat{})^2 = .5929$

$n3(p3-P\hat{})^2 = 9.45$

$n4(p4-P\hat{})^2 = 8.40$

$n5(p5-P\hat{})^2 = 0.97$

$n6(p6-P\hat{})^2 = 8.40$

$n7(p7-P\hat{})^2 = 0.168$

$n8(p8-P\hat{})^2 = 0.0456$

$n9(p9-P\hat{})^2 = 0.168$

$n10(p10-P\hat{})^2 = 0.168$

$n11(p11-P\hat{})^2 = 8.76$

$n12(p12-P\hat{})^2 = .5929$

$n13(p13-P\hat{})^2 = 3.24$

$n14(p14-P\hat{})^2 = 0.4949$

$n15(p15-P\hat{})^2 = 3.24$

$$\sum_{i=1}^{15} ni(pi-P\hat{})^2 = 53.09$$

$$\chi^2 = \frac{1}{P\hat{}Q\hat{}} \sum_{i=1}^{15} ni(pi-P\hat{})^2$$

$$\chi^2 = \frac{1}{.76 \times .24} \times 53.09$$

$$\chi^2 = 291.06$$

Tabulated value of $\chi^2$ at .05 (14d.f) = 23.685

Calculated value of $\chi^2$ at .05 (14d.f) = 291.06

Hence calculated value is greater than tabulated value. We reject our HO i.e. there is significant difference between proportions.

**Interpretation**

The analytical findings of the survey pertaining to working conditions and financial earnings in the MUL have been exhibited in Table No.3.1.

It is clear from the table that respondents are very much satisfied with financial earnings and present working condition provided by the Company. 100 per cent respondent are satisfied with the financial earnings, timely increment, space for work and shift system of work. More than 82 per cent respondents are satisfied with the present scale of salary and similar number shows satisfaction towards likeness

of the shift system. But 72 per cent respondent were of the opinion that they are not getting any extra financial benefit which is not included in salary. More than 66 per cent respondents are satisfied with the overall working conditions prevailing win the company 78 per cent respondents are satisfied with lighting arrangements, 72 per cent respondent are satisfied with the ventilation provision, measures adopted to reduce noise and other safety measure. But only 55 per cent respondent prefer changes in shifts after long interval of time. More than 60 per cent respondents are aware of the environmental and ecological pollution control adopted by the Company.

**Case II Table No.3.2**

**Hypothesis:** We set the Null hypothesis (HO) that the favourable responses (i.e. Yes) of 146 units on the items 1,2,3,.....,16 are same i.e. there is no significant difference between the proportions p1,p2....,p16 i.e. E(p1) = E(p2) = ..... E(p16) $\cong$ $\hat{P}$ under the case of large sample. $\hat{P}$ can be as $\hat{P} = \sum pi/16$.

Therefore under this HO: as the sample size is large. Chi-square statistics is

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni(pi-\hat{P})^2$$

**Table 3.2**
**Facilities and Amenitie Provided by the MUL to their Employees & Workers: Opinions.**

No. of Respondents 146 (Percentage)

| Facilities | Yes | No | Total |
|---|---|---|---|
| Proper training facility in the company | 82.88 (121) | 17.12 (25) | 100 |
| Training Facility at abroad | 78.00 (114) | 22.00 (32) | 100 |
| Is there sufficient means available to train the person on/of the job | 66.44 (97) | 33.56 (49) | 100 |
| Are you satisfied with the present system of training | 78.00 (114) | 22.00 (32) | 100 |
| Is there any training programme for non-technical personnel | 55.48 (81) | 44.52 (65) | 100 |
| Do you like uniform as a dress | 100.00 (146) | - | 100 |
| Do you prefer same canteen facility | 100.00 (146) | - | 100 |
| Do you like open office system | 100.00 (146) | - | 100 |
| Are you satisfied with an amenities provided to you and your family and dependent | 78.00 (114) | 22.00 (32) | 100 |
| Are you saisfied with breaks, intervals, vacations and holiday | 17.12 (25) | 82.88 (121) | 100 |
| Do you have annual vacation | - | 100 (146) | 100 |
| Do you have sports facilities | 100 (146) | - | 100 |
| Do you have recognised team in any major game | 22.00 (32) | 78.00 (114) | 100 |
| Is Company operating any education institution | - | 100 (146) | 100 |
| Do your children have reservation facility in any school/college | 100 (146) | - | 100 |
| Do you have housing facility | 55.48 (81) | 44.52 (65) | 100 |

Note: Figures in parenthesis represents no. of respondents.

$$\chi^2 = \frac{1}{P\hat{}Q\hat{}} \sum_{i=1}^{16} ni(pi-P\hat{})^2$$

$\chi^2$ distribution with 15d.f. i.e. if $\chi^2 = \chi^2_{.05(15)}$ reject HO and conclude that pis are significantly different then we write interpretation accordingly.

**Calculations**

$$\chi^2 = \frac{1}{P\hat{}Q\hat{}} \sum_{i=1}^{16} ni\ (pi-P\hat{})^2$$

$$\chi^2 = \frac{1}{.645 \times .355} \times 115.27$$

$$\chi^2 = 503.36$$

Tabulated value of $\chi^2$ at .05 (15d.f) = 24.996

Calculated value of $\chi^2$ at .05 (15d.f) = 503.36

Hence calculated value is greater than Tabulated value. We reject our HO i.e. there is significant difference between proportions.

**Interpretation:** Table No.3.2 reflects the feelings of the respondents in regard to facilities and amenities provided by the company. It seems that respondents are generally satisfied with facilities and amenities provided by the company. Out of 146 respondents more than 82 per cent

respondents felt that the present system of training is very useful to train the employees at different level while 78 per cent respondents are benefited from the training programme abroad, more than 66 per cent respondents were of the opinion that sufficient means are available to train the personnel on the job and off the job and about 56 per cent respondents respond favourable in regard to training programme for non-technical personnel. This reflects the multi-dimensions of the training programme with in the company. It is clear from the table that 100 per cent favourable response from the respondents in regard to the uniform as a dress, same canteen facility, open office system and facility of the reservation for the employee's children in different schools. But on the other hand 100 per cent dis-satisfaction among the respondents was observed in regard to annual vacation and that the company is operating no educational institution. High degree of dissatisfaction was reported by the respondents with regard to breaks, interval, holiday etc. and sports facility in the major games (i.e. only 17 per cent in case of breaks etc. and 22 per cent in case of sport facility in the major games). About 56 per cent respondent showed their satisfaction towards housing facility, 78 per cent with regard to facility provided by the company to family members and dependents.

**Case III Table No.3.3**

**Hypothesis:** We set the Null hypothesis (HO) that the favourable responses (i.e. Yes) of 146 units on the items 1,2,3.....9 are same i.e. there is no significant difference between the proportions p1,p2,...,9 i.e. E(p1) = E(p2) = ..... E(p9) $\cong$ P^ under the case of large sample. P^ can be as P^ = $\sum$ pi/9.

Therefore under this HO: as the sample size is large. Chi-square statistics is

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni(pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{9} ni(pi-\hat{P})^2$$

$\chi^2$ distribution with 8d.f. i.e. if $\chi^2 = \chi^2_{.05(8)}$ reject HO and conclude that pis are significantly different then we write interpretation accordingly.

**Calculations**

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{9} ni\ (pi-\hat{P})^2$$

## Table 3.3

### MUL Employees Attitude Toward Job: Opinions

No. of respondents 146 (Percentage)

| Variables | Yes | No | Total |
|---|---|---|---|
| Satisfied with the working of MUL | 89.72 (131) | 10.28 (15) | 100 |
| Satisfied with Japanese Style of Management | 100 (146) | - | 100 |
| Are you aware of the concept of workers participation in Management | 78 (114) | 22 (32) | 100 |
| Does company operate any scheme of workers participation in management | 82.88 | 17.12 | 100 |
| Do you have any say in the preparation of agenda for the meeting regarding policy decisions | 33.56 (49) | 66.44 (97) | 100 |
| Are you satisfied with the promotion policy | 28 (41) | 72 (105) | 100 |
| It is based on seniority | - | 100 (146) | 100 |
| Is it based on merit | 89.72 (131) | 10.28 (15) | 100 |
| Is it based on merit-cum-seniority | 28 (41) | 72 (105) | 100 |

Note: Figures in parenthesis represents no. of respondents.

$$\chi^2 = \frac{1}{.59 \times .41} \times 71.74$$

$$\chi^2 = 296.57$$

Tabulated value of $\chi^2$ at .05 (8d.f) = 15.507

Calculated value of $\chi^2$ at .05 (8d.f) = 296.57

Hence calculated value is greater than tabulated value. We reject our HO i.e. there is significant difference between proportions.

**Interpretation**

In table no.3.3 an attempt has been made to test the attitude of employees towards their job by taking nine variables. The replies of 146 respondents were finally enumerated for final measurement. From the findings exhibited in Table No.3.3 it seems that with regards to working with the MUL, the present style of management, and workers participation in management, the attitude of the respondent was favourable. While in regard to promotion policy and workers say in policy decisions shows high degree of dissatisfaction. But the overall attitude towards job was considered as fair. 100 per cent respondents showed their satisfaction with the present system of management, more than 89% respondents are satisfied with the working of the MUL. 78 per cent respondents are

aware of the concept of workers participation in management. But 100% respondents are not satisfied with the present promotion policy, more than 89 per cent respondents were of the opinion that management promote employees on the basis of merit only, but 28 per cent respondents are of the view that promotion is based on merit-cum-seniority. More than 66 per cent respondents are of the opinion that they have no say in the preparation of agenda regarding policy decisions etc.

The responses of question numbers 7(c), 11(b), 12(b&c), 17(b), 20 and 21 are summed up were. Generally employees and workers are satisfied with the working conditions facilities and amenities provided by the company. The employees are very conscious about the safety measures. Employees need more safety measures in the form of education and necessary training in case of emergency. They want demonstration programmes on fire-fighting, accident prevention methods and emergency safety activity training. The company providing number of training facilities to their employees. For non-technical personnel training facility is provided in the form of commercial apprentice scheme, office management and secretarial practice but these programmes are not operating very effectively as more than 40 per cent of the respondents show there inability about the operation of training

programme for non-technical personnel. The success of the MUL largely depends upon the present style of management. Employees show very high degree of satisfaction from the present style of management. They describe number of good points of the present system. They are informal organisation structure, encourage development of participation, more emphasis on consultative management employees and workers feels that they are working in a democratic management in which strict rules for all employees at all levels where priority is given to production enhancement, and every suggestions from different levels given proper weightage. The basic ideology of this system is that the people can be self-directed and be creative at work. People learn to work as team-members. Loyalty, devotion, hardwork, sincerely, and punctuality are the other main factors of this system. The MUL has adopted the Joint Management Council and Maruti Sahyog Samiti schemes as a scheme of workers participation in management. All important policy decisions which effect the employees of the company is discussed at Maruti Sahyog Samiti before it took the final shape. Employees are satisfied with the present scheme of workers participation. Promotion in the MUL is purely on merit basis. In any category one has to secure at least 40 marks to get promotion. Maximum marks one can obtain in a year is 15 i.e. (outstanding performance).

Employees are not satisfied with the present promotion policy operated in the MUL. The MUL is also providing a number of amenities to their employees in the form of leave travel assistance, medical reimbursement, vehicle loan, uniform including shoes and subsides food. The MUL has extended these facilities to their family. But only medical facility is extended to their dependents also.

**Analysis of Questionnaire B**

In the questionnaire B the sales policies of the Company was analysed with the help of statistical tool.

**Case IV Table No.3.4**

**Hypothesis:** We set the Null hypothesis (HO) that the favourable responses (i.e. yes) of 65 units on the items 1,2,3,....., 13 are same i.e. there is no significant difference between the proportions p1,p2,.....p13 i.e. E(p1) = E(p2) = ..... E(p13) $\cong$ $P\hat{}$ under the case of large sample. $P\hat{}$ can be as $P\hat{} = \sum pi/13$.

Therefore under this HO: as the sample size is large. Chi-square statistics is

$$\chi^2 = \frac{1}{P\hat{}Q\hat{}} \sum_{i=1}^{k} ni(pi-P\hat{})^2$$

$$\chi^2 = \frac{1}{P\hat{}Q\hat{}} \sum_{i=1}^{13} ni(pi-P\hat{})^2$$

## Table 3.4

**Employees attitudes towards in regard to the Growth policies of the MUL: Opinions**

| (No. of Respondents 65) | Percentages | | |
|---|---|---|---|
| Particulars | Yes | No | Total |
| Are the sales of the vehicles likely to be seasonal | 20 (13) | 80 (52) | 100 |
| Will the present advertising and sales policy is adequate for handling the new model (i.e. Maruti 1000) | 100 (65) | - | 100 |
| Any major changes in marketing programme in near future | - | 100 (65) | 100 |
| The sales of Maruti Vehicles will effect because of political factors | - | 100 (65) | 100 |
| Are you satisfied with the Govt. policies regarding import of components | 76.93 (50) | 23.07 (15) | 100 |
| Do you need further suppoort from the govt. | 53.85 (35) | 46.15 (30) | 100 |
| Do you have separate export selling department | 100 (65) | - | 100 |
| Are you satisfied with present export performance | 100 (65) | - | 100 |
| Did you think that the Maruti 1000 will also attract good number of buyers | 100 (65) | - | 100 |
| Will Maruti 1000 will effect the sale of your other models | 23.07 (15) | 76.93 (50) | 100 |
| Do you think Maruti 1000 will act as catalytic agent for export earnings | - | 100 (65) | 100 |
| Are you satisfied with the present level of indigenisation | 84.62 (55) | 15.38 (10) | 100 |
| Are adequate employee records maintained to assist managers in making decisions effecting employees | 100 (65) | - | 100 |

Note: Figures in parenthesis represents no. of respondents.

$\chi^2$ distribution with 12d.f. i.e. if $\chi^2 = \chi^2_{.05(12)}$ reject HO and conclude that pis are significantly different then we write interpretation accordingly.

**Calculations**

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{13} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{.58 \times .42} \times 66.9$$

$$\chi^2 = 274.63$$

Tabulated value of $\chi^2$ at .05 (12d.f) = 21.026

Calculated value of $\chi^2$ at .05 (12d.f) = 274.63

Hence calculated value is greater than tabulated value. We reject our HO i.e. there is significant difference between proportions.

**Interpretation**

From the findings exhibited in Table 3.4 it seems that the employees and workers of the MUL are generally satisfied with the present growth and sales policies of the company.

The attitude of the respondents was quite favourable in regard to present advertising policy, sale-policy and export performance of the company. 100% respondents showed their satisfaction in all the above three matters. 100% respondents was of the view that proper records of the employees are maintained in the company to assist managers when needed.

About 84 per cent respondents are satisfied with the present level of indigenisation, more than 76 per cent respondents are satisfied with the government policies regarding import of components. But 80 per cent respondents was of the opinion that the sales of the vehicles is not seasonal. About 54 per cent respondent was of the opinion that more incentives must be given to the MUL in regard import of raw material and components. But 100% respondent was of the opinion that at present there is no programme to make changes in marketing policy of the company. 100 per cent respondent say No in regard to the sales of Maruti vehicles will effect because of political factors. Similarly 100 per cent respondents say No in regard that the Maruti 1000 will act as a catalytic agent. More than 76 per cent respondents was of the opinion that Maruti 1000 will not effect the sales of the present model. In regard to the question no.2(b) the sales of the Maruti vehicles in Northern

India depends upon the weather conditions during summer season the demand of A.C. vehicles shoot up and during winter the demand of vehicles with heater increases. In response to question no. 8(b) the respondent that such imports should be permitted free of duty, against an export commitment given by Maruti. In response to question no. 10(b) the MUL official relating to export marketing are very optimistic. They have number of ideas in their mind towards export promotion such as publicity through international journals and Indian diplomatic missionaries should use Maruti vehicles in such countries were export potential exists. Export price subsidization. In response to question no. 22 respondents said there are number of factor which were responsible for continuous price hiking in the Maruti vehicles. The important ones are government taxes, Yen exchange rate, lack of competition in the market, and hike in dealers commission. The response to question no. 24 in regard to the main problems of the company will be discussed later in this chapter in detail. The respondents fail to give any information regarding R&D expenditure of the company. But in response to question no.18 in regard to capacity utilization percentage of the company is given below in Table no.3.5.

The above table shows the trends in capacity utilisation in the MUL between 1984-85 to 1988-90. It is

**TABLE 3.5**

**Capacity Utilisation in the MUL**

| Years | Licensed Capacity | Installed Capacity | Actual Production | Capacity Utilisation in % |
|---|---|---|---|---|
| 1984-85 | 1,40,000 | 20000 | 22372 | 111.86 |
| 1985-86 | 1,40,000 | 40000 | 51580 | 128.45 |
| 1986-87 | 1,40,000 | 100000 | 80150 | 80.15 |
| 1987-88 | 1,40,000 | 100000 | 92630 | 92.63 |
| 1988-89 | 1,40,000 | 100000 | 105547 | 105.55 |
| 1989-90 | 1,40,000 | 100000 | 117400 | 117.40 |

Source: Obtained through questionnaire

evident from the table that there has been an impressive increase in the level of capacity utilisation which rose from 111.86 per cent in 1984-85 to 117.40 per cent in 1989-90. The table shows an upward trend in the year 1985-86 in 51580 vehicles were produced against the installed capacity of 40000 vehicles. But in the years 1986-87 and 1987-88 the worked below 100 per cent capacity utilisation because of the shortage of components.

**Analysis of Questionnaire C**

Questionnaire C contain 12 questions with an objective to measure customers attitude towards Maruti vehicle. This questionnaire is divided into two tables. Table no.3.6 deals with general satisfaction from the vehicle and dealer attitude. Table 3.7 deals with the satisfaction and performance of the different parts of the vehicle. The analysis of this questionnaire is also done on the same pattern as in questionnaire A & B.

**Case V Table No. 3.6**

**Hypothesis:** We set the Null hypothesis (HO) that the favourable responses (i.e. yes) of 256 units on the items 1,2,3,..... 8 are same i.e. there is no significant difference between the proportions p1,p2,....,p8 i.e. E(p1) = E(p2) = ..... E(p8) $\cong$ $P\hat{}$ under the case of large sample. $P\hat{}$ can be as $P\hat{} = \sum pi/8$.

## Table 3.6

### Customers Attitude Towards Maruti Vehicles: Opinion

No. of Respondent = 256 (Percentage)

| Variables | Yes | No | Total |
|---|---|---|---|
| Are you satisfied with the over all performance of your car | 100 (256) | - | 100 |
| Are you satisfied with the behaviour and response of the dealer while purchasing vehicle | 91.80 (235) | 8.20 (21) | 100 |
| After the warranty period | 100 (256) | 0 | 100 |
| During the warranty period | 35.16 (90) | 64.84 (166) | 100 |
| If the behaviour of the dealer was not proper. Did you report to company | - | 100. (256) | 100 |
| Are you particular about visiting only authorised dealers for servicing | 64.84 (166) | 35.16 (90) | 100 |
| For Repairs | 77.34 (198) | 22.66 (58) | 100 |
| For Spare parts | 56.25 (144) | 43.75 (112) | 100 |

Note: Figures in parenthesis represents no. of respondents.

Therefore under this HO: as the sample size is large. Chi-square statistics is

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni(pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{8} ni(pi-\hat{P})^2$$

$\chi^2$ distribution with 7d.f. i.e. if $\chi^2 = \chi^2.05(7)$ reject HO and conclude that pis are significantly different then we write interpretation accordingly.

**Calculations**

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{8} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{.66 \times .34} \times 87.57$$

$$\chi^2 = 390.24$$

Tabulated value of $\chi^2$ at .05 (7d.f) = 14.067

Calculated value of $\chi^2$ at .05 (7d.f) = 381.55

Hence calculated value is greater than tabulated value. We reject our HO i.e. there is significant difference between proportions.

**Interpretation**

It is clear from table no.3.6 that customers are generally satisfied with the performance of the Car and with the services provided by the dealers. 100 per cent respondents show their satisfaction with the overall performance of the Car and behaviour of the dealer offer warranty period. About 92 per cent respondents are satisfied with the behaviour of the dealer, while vehicle purchasing the vehicle. But more than 64 per cent are dissatisfied by the behaviour of the dealer during warranty period. This indicate that to judge customer satisfaction in regard dealer behaviour warranty is the major indicator. But 100 per cent respondents say NO in regard to report the grievances to company. Nearly 65 per cent respondents are particular in visiting authorised dealers for servicing more than 75 per cent for repair and more than 55 per cent for spare parts.

**Case IV Table No.3.7**

**Hypothesis:** We set the Null hypothesis (HO) that the favourable responses (i.e. satisfied) of 256 units on the items 1,2,3,....., 12 are same i.e. there is no significant difference between the proportions p1,p2,....,p12 i.e. $E(p1) = E(p2) = \ldots\ldots\ldots E(p12) \cong \hat{P}$ under the case of large sample. $\hat{P}$ can be as $\hat{P} = \sum pi/12$.

Table 3.7

Customers Attitudes Toward Maruti Vehicles: Opinions

No. of Respondents = 256 (Percentage)

| Variables | Satisfied | Dissatisfied | Total |
|---|---|---|---|
| **Indicate the level of satisfaction of performance of the following** | | | |
| (i) Starting | 100 (256) | - | 100 |
| (ii) Pick Up | 100 (256) | - | 100 |
| (iii) Fuel consumption | 91.80 (235) | 8.20 (21) | 100 |
| (iv) Ignitions & Head Light | 100 (256) | - | 100 |
| (v) Balancing | 22.66 (58) | 77.34 (198) | 100 |
| (vi) Alignment | 14.07 (36) | 85.93 (220) | 100 |
| (vii) Breake | 91.80 (235) | 8.20 (21) | 100 |
| viii) Clutch | 31.64 (81) | 68.36 (175) | 100 |
| ix) Shockers | 56.25 (144) | 43.75 (112) | 100 |
| x) Steering | 100 (256) | - | 100 |
| xi) Fuel Filter & Air Filter | 100 (256) | - | 100 |
| xii) Engine | 100 (256) | - | 100 |

Note: Figures in parenthesis represents no. of respondents.

Therefore under this HO: as the sample size is large. Chi-square statistics is

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni(pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{12} ni(pi-\hat{P})^2$$

distribution with 11d.f. i.e. if = .05(11) reject HO and conclude that pis are significantly different then we write interpretation accordingly.

**Calculations**

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{k} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{\hat{P}\hat{Q}} \sum_{i=1}^{12} ni\ (pi-\hat{P})^2$$

$$\chi^2 = \frac{1}{.7575 \times .2425} \times 153.68$$

$$\chi^2 = 836.58$$

Tabulated value of $\chi^2$ at .05 (11d.f) = 19.675

Calculated value of $\chi^2$ at .05 (11d.f) = 836.58

Hence calculated value is greater than tabulated value. We reject our HO i.e. there is significant difference between proportions.

**Interpretation**

It can be observed from the table no.3.7 that customers are generally satisfied with the performance of different parts. 100 per cent respondent are satisfied with the performance of Pickup, Starting, Ignition & Headlight, Steering, Fuel Filter, Air Filter and Engine. Nearly 91 per cent respondent are satisfied with the performance of the brakes and fuel consumption of the vehicle. But a high degree of dissatisfaction was observed in regard to alignment and balancing of the vehicles i.e. 86 per cent respondent are dissatisfied with the alignment problem and about 77 per cent respondent are dissatisfied with balancing problem. About 31 per cent are satisfied with the performance of the clutch and about 56 per cent are satisfied of the shockers. The responses of question 4 are all most same as in question 3. The only difference was that respondent in regard to radiator, body rattling, clutch and pressure plate and shockers are not satisfied.

**Problems:**

The Maruti Udyog played a crucial role in developing the automobile industry of the country. But the MUL failed to

fulfill its own commitment to produce a people's Car.

**Problem of Indigenisation :**

The MUL failed to achieved its indigenisation target. Low level of indigenisation in the MUL is the major problem of the company. All the other problems are directly or indirectly linked with the problem of indigenisation. The indigenisation targets were not achieved because the Indian auto ancillary industries was not in a position to supply the products in conformity with specification. This shows that the MUL does not have command over the domestic ancillary industries to secure supplies of components and equipment of a reasonable quality.

For this it is suggested that the MUL should make use the land at its disposal to develop ancillary units for as many as parts possible. This public sector company has also a social responsibility for developing auto-ancillary industry of the country.

**Lack of Well Developed Vendors**

The development of the MUL largely depends upon the vendors development. The MUL has been facing difficulties in locating and selecting suitable vendors. An often materials

and parts delivered directly to the assembly line without infection, storage and inventory accumulation, under these circumstances an assessment of the vendors company as a whole and not just the part which was being purchased became crucial. The emphasis is given only on the quality of the product if strict criteria is maintained by the MUL in all areas to select vendors no vendor would able to qualified and the attainment of indigenisation would be unfeasible. The vendors fail to supply the component timely with quality specification as required by the MUL because they are unable to maintain total consistency of quality over large numbers and over extended periods of time. Their capacities are not enough. They are reluctant to invest in process control equipment because of high import duty. The vendors low product capacity makes the MUL depend on three or four suppliers for each component.

It is suggested that the government should come up with concrete steps to develop auto-ancillary industry of the country. More emphasis will be given on R&D for which government must give some additional incentives who come forward to develop this industry. The MUL is also required to spent a huge amount in R&D to develop auto-ancillary industry. The government will invite big business house to

invest its capital in this industry for which they will be given income tax rebate etc.

**Low Level of Production**

Attaining production targets is linked to successful indigenisation because assembly line closure due to component shortage. Component suppliers were able to cope with the MUL low volume of production earlier (22,372 vehicles in 1984-85 and 51580 in 1985-86) but buckled under the pressure of higher volumes in the later years. The production target for 1986-87 was raised to 85000 (from 80000 in the project report) but the actual achieved was only 80150 units. In 1987-88 the target was raised to 108000 (it was 100000 in the project report) but then reduce first to 100,000 and later to 97,500 but the output was 92,630 vehicles only. The reason in both the years was production losses due to component shortages.

For this it is suggested that the MUL production department must keep the necessary stock of the critical component so at time of shortage this inventory fulfil the requirement and conveyor will not stop in future this will lead some cost but this cost is much lower than which suffer due to stoppage of conveyor. By doing this the MUL also able to have command in the auto-ancillary industry.

**Excess of Expenditure**

With indigenisation behind schedule and supplies of locally made components not enough to meet the Maruti's needs necessitating partial imports hard currency out flows on component import have been far in excess of the levels envisaged in the project report. Foreign exchange expenditure rose from $ 44.21 million in 1984-85 to a peak of $ 141.84 million in 1986-87, then fell somewhat to $ 117.62 million in 1987-88 and marginally to $ 114.89 million in 1988-89. As a result the five year total was $ 515.15 million which was excess of $ 331.53 million against the anticipated in the project report. The main reason was delays in the indigenisation caused an excess foreign exchange outflow of $ 102.70 million. The other reasons were that during this period 553119 additional vehicles were produce which accounted for $ 127.83 million of the excess expenditure and the appreciation of the Yen.

**Quality**

Quality is the sum total of a large number of activities which go into the making of products and services. The MUL is committed to maintain high quality standards in their products but fail to fulfil its promise. It is observed that quality of products in the MUL declining. The declining quality is a result of indigenous component which are not

accurate and durable as Japanese. The only remedy is to develop the entire auto-ancillary industry of the country.

To develop this industry it is suggested that the plant, equipments and manufacturing methods must be selected as per international standards of performance. Proper training facility must be made available to all employees at every level so they can well aware with modern management system. The owners of the units in this particular industry must educate their men in how to achieve quality. For this Quality Controls standards and methods covering almost every aspect of the product and process quality must be made compulsory to every unit of the Indian auto-ancillary industry. A feeling in employee to work as a team member must be introduced.

**Tax Structure :**

While the government has taken several steps to boost the MUL, its efforts lag much behind the requirement. The high volatile tax structure with annual and mid-year increase in customs and excise duty continuous appreciation of Yen and increased input costs have made the manufacturer struggle for financial viability. The tax burden has crippled the industry. Taxes including custom duties on capital goods imports as a part of project make two-third of the total

price. It is suggested that the government must come up with a comprehensive and clear cut policy in which special concessions will be given to those enterprises which work above 100 per cent capacity utilisation and 100 per cent indigenisation. The government must reduce duties and taxes in regard to import of necessary machinery in a view to modernise and develop the auto-ancillary industry. The government also clear all those projects which will not harm the country's foreign exchange position or in other words all those project which able to meet their foreign exchange requirement by exporting their products.

The other major problems which need attention are the rate of absenteeism found exceeded for this it is suggested that the promotion all financial benefits will be directly linked with the punctuality. No promotion or increment will be given to those employees who absent from the work more than 5 per cent. The tendency to overstate claims for reimbursement of personal expenses accounts especially in medical claim. Firstly it is suggested that company should have their own hospital which now become essential as company is providing housing facilities to their employees. Alternatively medical claims are directly made to the concerned hospital and upper limit must be fixed above that

concerned hospital or nursing home must take prior permission from the concerned authority. In case of conveyance expense only company conveyance made allow for which more small shuttles will be introduced. The MUL has fallen into the trap of changing models quickly and thereby becoming permanently dependent on imported components. For this it is suggested that the government will not allow any change the model until and unless management give assurance that by changing model only upto 10 per cent imported component required. The MUL not paying proper attention on sports facilities as they do not have any team in any major game of the country. For this immediate recruitment in sports quota will be required to encourage sport activities in the country and on the other hand to solve the problem of unemployment among sportsman. The MUL has to play a strategic development role in this industry it will have to overhaul its strategy and policies. The priorities will have to shift from just production efficiency to production innovation.

**Conclusion:**

In conclusion it may be observed that the automobile has become an important ingredient of nearly every aspect of economic and social life. The automobile industry has long occupied a central place in our society. Its impact on every

day life and human perception is so great that it has become something like a symbol of progress and development. Infact a healthy auto-industry is essential for the large scale industrialization of our country.

From the mid-1970s onward sweeping changes in the markets and technology have transformed international competitive conditions and spurred automobile manufacturers in every country to experiment with new strategies based on greater product diversity and more flexible method of production.

Spurting with the year 1942, the automobile industry of the country has developed into a vigorous sector of our economy. A new revolution in this sector has came with the coming into existence of the Maruti Udyog Limited, a pubic sector company which caters the needs of middle income group of population in the supply of passenger car etc.

With a short span of time the MUL has achieved a production rate of more than 400 vehicles per day. The production has increased to 117400 vehicles in 1989-90 against 852 vehicles in 1983-84 showing an overall rise of 113711.77 per cent with a rate of growth of 1958.83 per cent per annum. The production figure was the highest in 1985-86

showing an increase of 130.5 per cent over previous year. This sharp increase was due to the increasing level of indigenisation. Similarly the productivity per employee has increased from 1.48 in 1983-84 to 32.35 in 1989-90 showing an increase of 2085.81 per cent. The passenger car segment of the automobile industry showed a faster growth between 1981 to 1988 showing an over all growth of over 207 per cent. The growth in the post 1981 period was made possible due to the inception of the MUL. The movement in market share of passenger car sector also showed inclination towards Maruti since 1984. Since 1984 the MUL is responsible for holding more than 50 per cent share in the market. At present Maruti has captured more than 60 per cent of the domestic market. The sales of Maruti vehicles increased to 105592 units in1988-89 against 22048 units in 1984-85 which comes out to an increase of 378.92 per cent. The MUL started its exports in 1986-87 by exporting 102 vehicles and touched the figure of 5100 vehicles in 1989-90 showing a rise of 4900 per cent. The figure of exports rose from Rs. 0.55 crores in 1986-87 to Rs.36 crores in 1989-90. A rise in the year 1989-90 was a result of the fact that the MUL able to enter into the French market and orders were also received from Australia and West Africa. The MUL has made and is making substantial contribution to augment the resources of the central

government by way of dividends, excise duty, customs duty and other duties. The excise duty paid by the company increased from Rs.132 million in 1984-85 to Rs.1890 millions in 1988-89, representing a 1331.82 per cent rise. Similarly the customs duty paid by the company also increased from Rs.313 millions in 1984-85 to Rs.1128 millions in 1988-89 showing a rise of 260.38 per cent.

The turnover of the company has increased from Rs.42 millions in 1984-85 to Rs.9257 millions in 1988-89 showing an overall increase 21940 per cent with a rate of growth of 3656 per cent per annum. In the year 1986-87 the figure of turnover was highest showing an increase of 120 per cent over previous year. Similarly the capital employed has also increased from Rs.607.80 millions in 1983-84 to Rs.4258.30 millions in 1988-89 showing an increase of 600 per cent. The percentage of turnover to capital employed has increased from 6.91 in 1983-84 to 217.39 in 1988-89 showing an increase of 3046 per cent. The amount of net working capital has increased from Rs.197.8 millions in 1983-84 to Rs.2287 millions in 1988-89 showing an increase of 1056.3 per cent. All this indicates that the period under review was very crucial from the point of the development of the organisation because the manner in which the indicators such as capital

employed, networking capital etc. had increased this show that the base of indigenous technical know-how was laid down. There has been an impressive improvement in the quantum of gross profit which has increased from Rs.22.8 millions in 1983-84 to Rs.589.1 millions in 1988-89 showing an increase of more than 25 times. The percentage of capital employed has showed a market improvement from 3.75 in 1983-84 to 13.84 in 1988-89.

The profit before tax has also increased from Rs.17 millions in 1983-84 to Rs.589.1 millions in 1988-89 showing an overall rise of 3365 per cent. A remarkable improvement was observed in the year 1987-88 when the profit before tax was increased to Rs.264.4 millions against Rs.102.3 millions in 1986-87 showing a rise of 158.45 per cent. Such remarkable achievement was possible due to the fact that mere emphasis was given on export, thus reflecting the declining volumes of imports and the production crossed the targets well before.

A comparison was made between three major car manufacturing companies of the country (i.e. HML, PAL and MUL). On the basis of the liquidity and profitability ratios it is found that the financial position of the MUL was better than other two car manufacturing companies (i.e. PAL & HML). The comparison of Debt Equity Ratios shows that the position

of the MUL was better then the PAL & HML. The Debt-Equity Ratios of the PAL were 1.36:1, .39:1, .31:1 and .29:1 in the year 1983-84, 1984-85, 1985-86 and 1986-87 respectively. Similarly the figures of the HML were .60:1, .52:1, .68:1 and .97:1 in the year 1983-84, 1984-85, 1985-86, and 1986-87 respectively. It indicates that the financial positions of the two companies (i.e. PAL & HML) was not satisfactory because they were below 1:1. The capital structure of the MUL was decided with a debt to equity ratios of 3:2. The Debt-Equity Ratios of the MUL were 2.48:2, 2.78:2, 2.62:2 and 2.45:2 in the year 1984-85, 1986-87, 1987-88 and 1988-89. These were not satisfactory as they were below 3:2. But in the year 1985-86 the ratio was 3.05:2 which was satisfactory. As per gross profit ratios all the three companies were not working satisfactorily because all showed a low profit ratio. The Gross Profit Ratio of PAL was 11.7% in 1983-84 which came down to 4.3% in 1986-87. Similarly the Gross Profit Ratio of HML was 6.3 per cent in 1983-84 declined to 5.7 per cent in 1986-87. But the Gross Profit of MUL was 2.9 per cent in 1984-85 which increased to 5.9 per cent in 1988-89 indicating that the company was moving towards higher profit ratio. It is clear from the quick ratio analysis that the position of the MUL was very satisfactory between 1984-85 to 1988-89. The quick ratios were 1.12:1; 1:1; .92:1; 1.20:1; and 1.27:1 in

the year 1984-85, 1985-86, 1986-87, 1987-88 and 1988-89 respectively. They were satisfactory because they were approximately the same as 1:1. So far as the personnel policy of the MUL is concerned it can be termed as satisfactory. It provides incentive for hardwork, good conduct and loyalty towards the organisation. The recruitment in the MUL takes place at the entry level. The mass recruitment is restricted to three entry levels: Technicians, Supervisor and Executives. Promotion in the MUL is purely on merit basis. In any category one has to secure at least 40 marks to get promotion. The MUL provides a special programme of initial training and education for new employees. The training includes lectures on Japanese work culture and company activities given by the MUL executives. On the Job Training is complemented by formal classroom training. Exposure to various aspect of the MUL organisation is an important element in training. The MUL believes that the productivity of man depends largely on motivation and proper training.

A consistent effort was made by the MUL to meet the employees expectations by way of incentives and facilities. The importance of human resources in the MUL can be judge by the employee related ratios. The number of employees in the

year 1983-84 was 883 which rose to 3629 in 1988-89 showing a rise of nearly 311 per cent. The figure of turnover per employee rose to Rs.2588 thousand in 1988-89 against Rs.1147 thousand in 1985-86 showing an overall rise of 125.7 per cent. The value added per employee was Rs.192 thousand in 1984-85 which rose to Rs.520 thousand in 1988-89 showing an increase of 170.9 per cent. The amount of staff cost per employee was Rs.28 thousand in 1985-86 rose to Rs.44 thousand in 1988-89 showing a rise of 57.15 per cent. The figure of Loan & Advance per employee was Rs.1.5 thousand in 1984-85 which rose to Rs.11 thousand in 1988-89 showing a rise of 633.4 per cent. It is concluded that the value added per employee was increasing at a faster rate than the turnover per employee. In MUL performance appraisal of an employee is done by a Committee consisting three members i.e. Initiating Officer, Reviewing authority and Recommending authority. The basic emphasis is given on appraising the employees performance and not the person. Two appearances are conducted in a year one in January for the purpose of giving increments and promotions and another in July for the purpose of counselling.

The MUL is providing excellent working conditions to their employees in the form of working hours and shift, noise, illumination, temperature, ventilation, space work and

environment. The MUL gives special attention to improve the factory working environment, suppresses dust levels and improve aesthetics and landscaping. The employees are educated and made safety conscious by putting up banners and safety instructions on all shop floors and other areas. The MUL is also providing a number of amenities to their employees in the form of housing, mutual benefit trust, transport, medical, canteen, washing allowance, advance for purchase of vehicle, creche facility, education facility, sport facilities, attendance bonus and leave encashment.

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# Appendices

## APPENDIX-1

## QUESTIONNAIRE-A

## QUESTIONNARIE ABOUT MARUTI UDYOG LIMITED

(This questionnaire is purely for academic purpose and the information given by you will be kept strictly confidential).

Please tick your responses/choice in the space provided against each question.

**Personal data**

Name:

Age:

Designation:

Pay Scale:

Next Promotion due :

Q.1 Are you satisfied with the working of Maruti Udgyog?

Yes/No

Q.2 Are you satisfied with your financial earnings?

Yes/No

Q.3 (a) Are you satisfied with the present scale of salary?

Yes/No

(b) Are you getting some other monetary benefits which are not included in your salary?

Yes/No

(c) If yes, please specify?

---

Q.4 Are you getting some timely increment?

Yes/No

Q.5 Are you satisfied with the present bonus policy?

Yes/No

Q.6 Are you satisfied with the over all working conditions?

Yes/No

Q.7 (a) Is Company providing sufficient space for work?

Yes/No

(b) Is proper ventilation facility available?

Yes/No

(c) Are proper lighting arrangements there?

Yes/No

(d) Are proper measures adopted to reduce noise?

Yes/No

Q.8 (a) Are you satisfied with the safety measures adopted by the company?

Yes/No

(b) Do you need more safety measures? Yes/No

(c) If yes, please specify

---

Q.9 (a) Is there shift system of work? Yes/No

(b) If yes, how many shifts are there at present?

Yes/No

(c) Do you like shift system? Yes/No

(d) Do you prefer changes in shifts after long interval?

Yes/No

Q.10 (a) Are there some proper training programme in your company.

Yes/No

(b) Do you have training facility for going abroad also?

Yes/No

Q.11 (a) Is there sufficient means available to train the person on job: and off the job?

Yes/No

(b) Are you satisfied with present system of training?

Yes/No

Q.12 (a) Is there any training programme for non-technical personnel?

Yes/No

(b) If yes, please specify?

---

Q.13 (a) Are you satisfied with Japanese style of management as obtaining in your company?

Yes/No

(b) What are the good points of this system?

1. 2.
3. 4.
5. 6.

(c) What is the basic ideology of this system? Please explain in brief.

---

Q.14 Do you like the uniform as a dress? Yes/No

Q.15 Do you prefer same canteen facility to all? Yes/No

Q.16 Do you like open office system? Yes/No

Q.17 Are you aware of the concept of "workers" participation in management (WPM) ? Yes/No

Q.18 (a) Does your unit operate any scheme of WPM?

Yes/No

(b) If yes, which of the following scheme(s) have been adopted by/in your organisation?

i) Works Committees
ii) Joint Management Council
iii) Worker Director
iv) Any other

(if more than one thick them also)

Q.19 How do you feel about the working of WPM scheme?

i) Very effective
ii) Simply effective
iii) Not at all effective

Q.20 Do you have any say in the preparation of agenda for the meetings of the company?

Yes/No

Q.21 (a) Could you please explain in brief the promotion policy of your company.

---

(b) Is it based on:

i) Seniority ii) Merit
iii) Merit cum Seniority iv) Any other

(c) Are you satisfied with it ? Yes/No

Q.22 (a) What are the amenities provided by the company to you?

---

(b) To your family

---

(c) To your dependents

---

(d) Are you satisfied with it? Yes/No

Q.23 Are you satisfied with breaks, intervals, vacations and holidays? Yes/No

Q.24 Do you have annual vacation? Yes/No

(a) Do you have sports facilities? Yes/No

(b) If yes, do you have recognised team in any major game ?
Yes/No

(c) If yes, please specify the game:

---

Q.25 Is your company operating any educational institution?
Yes/No

Q.26 Do your children have reservation facility in any school/college?
Yes/No

Q.27 Do you have any housing facility? Yes/No

Q.28 (a) Have your company started any programme to check environmental pollution.? Yes/No

(b) Ecological pollution Yes/No

Q.29 Suggestions & comments, if any.

---

---

THANK YOU FOR YOUR HELP AND COOPERATION.

## APPENDIX-2

## QUESTIONNAIRE-B

Below are given few questions regarding the growth and sales policies of the Maruti Udyog Limited. Please give careful response to these questions since your valued cooperation is very essential for the success of this study. (This questionnaire is purely for academic purpose and information given by you will be kept strictly confidential).

Q.1 Since how long you are working in Maruti Udyog Ltd.

(i) Less than one year

(ii) 1-3 years

(iii) 3-5 years

(iv) More than 5 years

Q.2 (a) Are the sales of the vehicles likely to be seasonal?

Yes/No

(b) If yes during which months (season) is the demand greater

Q.3 Will the present advertising and sales policy be adequate for handling the new model without hurting the other existing models?

Yes/No

Q.4 (a) Does your Company plan any major changes in its marketing programmes?

Yes/No

(b) If yes what ----------

Q.5 Is it likely that the sales of Maruti Vehicles will shift because of political factors?

Yes/No

Q.6 Can your vehicle compete in a market where technology changes are frequent

Yes/No

Q.7 Are you satisfied with the Government policy regarding import of components.

Yes/No

Q.8 (a) Do you need further support or help from Government

Yes/No

(b) If yes what type ----------

Q.9 Should you have a separate export selling department

Yes/No

Q.10 (a) Are you satisfied with present export performance?

Yes/No

(b) If yes what are the future steps which are to be taken for export promotion

---

Q.11 Do you adopt some steps to check the foreign exchange outflow?

---

Q.12 What will be the probable cost of Maruti 1000?

---

Q.13 Do you think it will attract same number of buyers as witnessed in other models?

Yes/No

Q.14 Do you think Maruti 1000 will act as Catalytic agent for export earnings

Yes/No

Q.15 Will Maruti 1000 will affect the sale of your other models?

Yes/No

Q.16 What are the major achievements of R&D Section

---

Q.17 Please indicate the R&D expenditure of your Company.

| Year | R&D expenditure |
|---|---|
| 1983 | _____ |
| 1984 | _____ |
| 1985 | _____ |
| 1986 | _____ |
| 1987 | _____ |
| 1988 | _____ |
| 1989 | _____ |

Q.18 What is the capacity utilization percentage of your company?

| Year | Capacity Utilization |
|---|---|
| 1983 | _____ |
| 1984 | _____ |
| 1985 | _____ |
| 1986 | _____ |
| 1987 | _____ |
| 1988 | _____ |
| 1989 | _____ |

Q.19 Do you think following are the most important factors limiting full capacity utilization in your company?

| | | |
|---|---|---|
| i) | Govt. Taxes Excise | Yes/No |
| ii) | Power Cut | Yes/No |
| iii) | Labour Unrest | Yes/No |
| iv) | Availability of raw material | Yes/No |
| v) | Any other (if yes, please specify) | Yes/No |

Q.20 What is the present level of indigenisation of your vehicles.

| | | |
|---|---|---|
| i) | Car | % |
| ii) | Omni | % |
| iii) | Gypsy | % |

Q.21 (a) Are you satisfied with it? Yes/No
(b) If yes please project the future indigenisation level

_____

Q.22 What factors were responsible for continuous price hiking of your vehicle?

---

Q.23 Are adequate employee records maintained to assist managers in making decisions affecting employees?

Yes/No

Q.24 What are the main problems of your Company ?

---

Please give some personal information:

Name: ----------

Designation: ----------

Department: ----------

Pay scale : ----------

THANK YOU VERY MUCH FOR YOUR HELP AND COOPERATION

Note: To mention name and designation is optional.

## Appendix-3

### QUESTIONNAIRE-C

### QUESTIONNAIRE FOR MEASURING CONSUMERS ATTITUDE TOWARDS MARUTI VEHICLES

Dear Customer,

Please tick your response/choice in the space provided against each question.

Name : ----------

Age : ----------

Designation : ----------

Q.1 Kindly tick the reason/reasons for the purchase of your Car.

i) Safer & Convenient vehicle
ii) Due to fuel efficiency
iii) Motivated by advertisement
iv) Better Technology
v) No other choice in this range

Q.2 Are you satisfied with the over all performance of your Car?

Yes/No

Q.3 Indicate the level of satisfaction of performance of the following?

| | Satisfied | Dissatified |
|---|---|---|
| i) Starting | | |
| ii) Pick up | | |
| iii) Fuel consumption | | |
| iv) Ignition & Head light | | |
| v) Balancing | | |
| vi) Alignment | | |
| vii) Brakes | | |
| viii) Clutch | | |
| ix) Shockers | | |
| x) Steering | | |
| xi) Fuel Filter & Air Filter | | |
| xii) Engine | | |

Q.4 Have you experienced any major problems with any of the following parts?

| | | Minor Repair | Major Repair | Replaced |
|---|---|---|---|---|
| i) | Differential | | | |
| ii) | Gear Box | | | |
| iii) | Engine | | | |
| iv) | Clutch & Pressure Plate | | | |
| v) | Muffler | | | |
| vi) | Radiator | | | |
| vii) | Shockers | | | |
| viii) | Fuel Pump | | | |
| ix) | Steering | | | |
| x) | Body rattling/alignment | | | |

Q.5 Can you suggest the maximum duration of waiting period after making payment?

Q.6 What was the behaviour and response of the dealer while purchasing the vehicle? Is it upto your expected level?

Yes/No

Q.7 How do you feel about the dealer's responsiveness to your problem?

| | Positive | Satisfactory | Not Satisfactory |
|---|---|---|---|
| i) During the warranty period | | | |
| ii) After the warranty period | | | |

Q.8 (a) If the behaviour of the dealer was not proper? Did you report your grievances to company?

Yes/No

(b) If yes action taken by the company was to your satisfaction?

Yes/No

How often do you get the vehicle serviced?

(i) After every 5000 km
(ii) After every 10000 km
(iii) According to service booklet

Q.10 Are you particular about visiting only the authorised dealers for :

(i) Repairs Yes/No

(ii) Servicing Yes/No

(iii) Spare parts Yes/No

Q.11 Are the genuine spare parts available with the dealer?

(i) Most of the time

(ii) Some times

(iii) Rarely

Q.12 Do you classify this car primarily as:

(a) Economical

(b) Luxury

(c) Utility

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